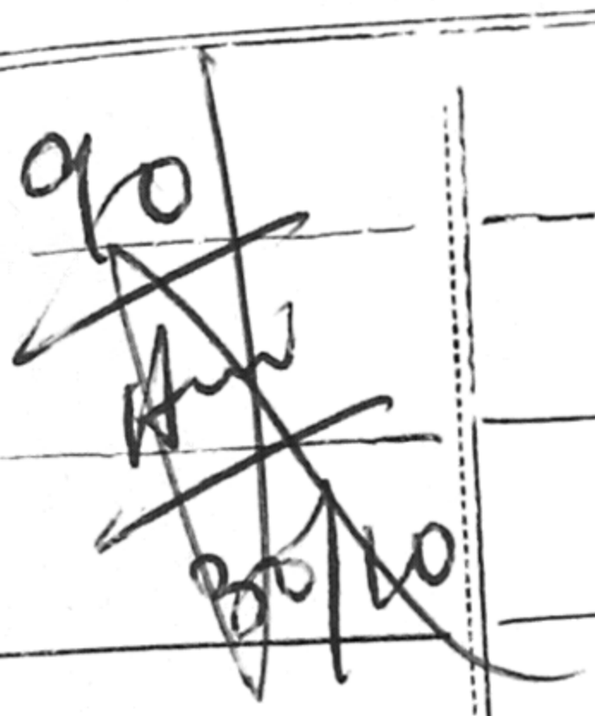


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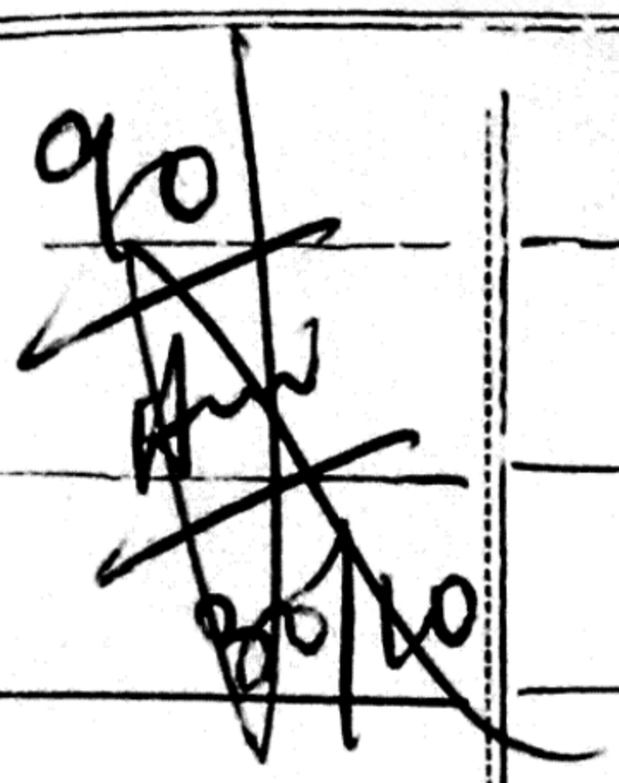
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THE INDUSTRIAL EVOLUTION OF INDIA IN RECENT TIMES, 1860-1939

(D. R.) GADGIL

1112

FIFTH EDITION

Indian Branch

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PREFACE

THE first edition of this work, published in 1924, presented a sketch of the economic history of India from the fifties of the last century to the beginning of the war in 1914. It was first written as a thesis for the degree of Master of Letters of Cambridge University and was printed, except for a few verbal alterations, almost in the same form as the thesis. This part of the work has not been revised subsequently and represents the portion of the publication ending with Chapter 14, 'The Pre-War Period—Conclusion'. When, in 1929, a second edition was put forth a new chapter dealing with all aspects of economic history of the period after 1914 was added to the original work. At the time of the issue of the third edition in 1933 this chapter was revised to keep it abreast of the times. At the time of the publication of the fourth edition in 1942 the chapter dealing with the period after 1914 was not revised but a long preface bringing out the main features of developments during the thirties was included.

When some years ago the publishers raised the question of a further revision for bringing out a new edition, I faced a number of problems, including that of lack of time. Two main decisions had to be taken. Firstly, what period should be covered, and secondly how the earlier material should be treated. The period from 1857 to 1947 is a logically convenient period which can be dealt with in an integrated fashion. It was the period during which undivided India was under direct administration of the English crown and till 1937 Burma was also associated with it. It was, therefore, my original intention to bring this sketch of economic history up to 1947. However, the difficulty of finding adequate time to cover the whole period satisfactorily made it necessary to be content with bringing the revision of this edition to the beginning of the second world war in 1939.

The revision has taken the form of rewriting the account of the entire period after 1914. The publication thus puts

together essentially two different pieces of writing. The first is the original Cambridge thesis dealing with the period up to 1914. This has been deliberately kept in the original form and shows many signs of the period of its writing. This course has been decided upon as evidently the account had been found useful by students and any revision of it, so many years later, might have involved writing an entirely new book. The second is the sketch of economic history from 1914 to 1939. This has been rewritten as a whole.

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CHAPTER I

Introductory

THE enormous revolution in the methods of transport, brought about during the nineteenth century, has converted the whole world into one market, and thus brought about a state of things in which the old economic units have been superseded. The forces making for a change in the economic conditions now work over whole continents. The latest phase of economic transition in the world's history has been marked by the one remarkable fact that this change, which was originally brought about in one part of the world, has radically affected the structure of economic society in almost all others. India has been no exception to this rule. She began to feel the impact of these forces quite early, and change of some magnitude has been going on in her economic structure during the last century. But the exact period when the forces working towards this change began to operate is very difficult to determine. In the history of no country is it easy to separate two periods by a clearly defined line; this is, perhaps, more true of India than of almost any other country.

One of the first causes operating towards an economic transition was perhaps the establishment of British rule in India, and this also synchronized with the beginning of the competition of British manufactures with Indian industry. But the establishment of British rule itself was a slow and a lengthy process. For though Bengal was acquired at the time of Clive, Upper Burma was annexed only under the viceroyalty of Lord Dufferin—a period of more than a hundred years. Another important factor was the introduction of a new revenue system—or rather systems, for they differed widely over different provinces—by the British, and also the introduction of a new system of judicial administration. All these changes in administration began to be introduced towards the beginning of the nineteenth century, but had

not taken full effect even by 1850. These changes were slowly operating on the old Indian economic structure, but their total effect was by no means large. The main and the really important factor, which brought about this economic transition, was the opening up of India by means of roads, railways and the new steamship routes. It is this which brought the Indian markets and the Indian supplies of raw materials closer to the West, and thus caused a direct impact of Western methods of production and exchange on Indian industry and trade, and that really affected the organization of Indian industrial society.

To get an adequate idea of the effect of this contact, it is necessary to see what was the constitution of the old Indian economic structure. India is, and has always been, pre-eminently an agricultural country. The first fairly reliable census for the whole of India was taken in 1872. This gives under the classification of the adult male population 56·2 per cent as engaged in agriculture, to which must be added the 12·3 per cent classified as general labourers, giving altogether 68·5 per cent of the adult male population deriving their livelihood from land.[1] There is no reason to believe that the percentage of persons employed in agricultural pursuits was ever much less. But even these figures are not enough to emphasize the overwhelming importance of agriculture in India, for most of the rural population, even though engaged in an industrial occupation, had agriculture as a subsidiary occupation. The really important unit, then, was the village in India. This unit differed in size from one part of India to the other. In the plains, the average village was of a considerable size, corresponding to what would be described as a 'township' in England; while in the hilly and the barren tracts it was much smaller, being properly described only as a 'hamlet' or even as 'scattered homesteads'. The peasantry also formed the overwhelming majority of the total Indian population. The economic condition of the peasantry, on account of the differences in political conditions, was not the same in all parts of India at the beginning of the nineteenth century. In the Bombay Deccan the ordinary peasant was almost as well off as his contemporary in

[1] This estimate even is too low, as subsequent censuses prove.

England;[2] while in many other parts of India, on account of the depredations of the bands of robbers and general unsettled condition of the country, his condition was the worst possible. But generally speaking, the condition of the peasants may be described as depressed during this period. The Permanent Settlement of Bengal had failed to protect the small peasant from the exactions of the zemindars, and in most other parts the initial assessments of the land revenue, levied by the British, were very heavy.[3] They weighed very heavily; for example, on the once prosperous tract of the Bombay Deccan after the British acquired it in 1818.[4] In this tract they were considerably eased in 1836, but it took the peasantry nearly 25 years to recover from the crushing effect of the initial assessments. In the Madras Presidency also, the state of the peasantry was far from prosperous, chiefly on account of the very exorbitant land revenue demands.[5] The Government had to reduce the assessments later on, on account of the deplorable condition of the cultivators, and this reduction with other causes tended to improve the condition of the people.[6]

In the first half of the nineteenth century, the state of internal communication in India was extremely defective. In most parts of the country roads as such did not exist, and where they did exist their condition was very unsatisfactory. The Indus and the Ganges, with their tributaries, were the only river systems that were navigable to any large extent. With the help of these navigable rivers and a few 'made roads', the state of communications in north India was not so utterly bad as in the south. Some idea of the

[2] G. Keatinge, *Rural Economy in the Bombay Deccan*, chap. i (1912). The remarks are specially applicable to the Deccan before the march of the Holkar in 1802 and the famine that followed.

[3] R. C. Dutt, *India in the Victorian Age*, part i.

[4] *Report of the Committee on the Riots in Poona and Ahmednagar*, chap. ii (1875).

[5] S. S. Raghavaiyangar, *Memorandum on the Progress of the Madras Presidency during the Last Forty Years*, sec. iii (1893).

[6] R. Baird Smith describes the condition of the peasantry in the N.-W. Provinces in 1837 as 'debilitated by a fiscal system that was oppressive and depressing in its influence and with its agricultural population discontented under the extreme confusion into which, by the action of the revenue and judicial systems, their most treasured rights had been thrown'. (*Report of the Famine of 1860-1 in the North-West Provinces and the Punjab*, p. 21.)

conditions in the south will be gained from the reports of the Public Works Commissioners, appointed by the Madras Government. They report that, at the beginning of the century, there was an almost complete absence of any roads in the Presidency. Some attempts had been made by the East India Company to improve this state of affairs, but they were very meagre as compared with the area of the Presidency. The following description by the Commissioners of the best kind of road is very illuminating. They write: '. . . nearly the whole of the made roads (so called) are only so far made as to be just practicable for carts. They admit of carts moving in dry weather with light loads at a very slow pace and by very short stages. But by far the greater portion of these roads are unbridged and a heavy shower cuts off the communications wherever the stream crosses a line; and they are in many cases so unfit to stand the effects of the wheels while the surface is wet, that in monsoon months they are out of use except for cattle or foot passengers."[7] It is not surprising, then, to find that the rates for carriage of any agricultural produce were exorbitant, and that consequently there was very little trade in existence. On account of the bad state of the roads, the carts used in many parts of the country were of a primitive type. A curious proof of this effect of the state of roads on the character of the carts used is afforded by the fact that, in the Central Provinces, when the roads were greatly improved in 1860-65, a superior kind of cart at once came into use.[8] The effect of this lack of communications on the volume of the export trade of a country is obviously important; but its effect on the internal trade is even more so. It made the carriage of bulky and cheap goods almost impossible, and generally speaking, restricted trade to the comparatively light and valuable products.[9] But, even in these, the

[7] *First Report of the Public Works Commissioners, Madras* (1852). There were only 3,110¼ miles of even these made roads in the Madras Presidency in 1846.

[8] Evidence of Mr Nicholls before the Indian Famine Commission (1880). Section on agricultural improvement.

[9] In north India the conditions were better, and along the rivers quite a considerable trade even in bulky products was carried on. This was also the case in some parts of central India. Mirzapur, for example, carried on a flourishing trade in cotton with Nagpur and Berar. But most of this was

trade was not very large. Dr Birdwood remarks in his report on the Central Museum in 1863: 'Koftgaree and the exquisite soapstone ware of Agra were not known in Bombay until sent to the Museum by the Lieutenant-Governor of the Punjab.'[1] This is surprising, seeing that, under Maratha rule, there was a brisk trade between the Deccan and north India. But there is no doubt that, at any rate, a good many of the art products of the north were unknown in the south. The consequence of this was naturally 'an extremely limited market even for the best and most characteristic native products'.[2] Thus, during the first half of the nineteenth century, the trade of India was restricted, within very small bounds, as regards the kind of goods, and also as regards the distance traversed.

The internal trade of the country being in such a state, the prices in one part of the country had no relation whatever with prices in any other part. It also follows that, the unit of easy trading being so narrowed down, the fluctuations in prices—especially of foodgrains—were sudden and violent. India is a country where the prices of foodgrains, in any particular year, had always been solely dependent on the nature of the monsoon that year. When, as was the case before the construction of roads and railways, there were no large districts to draw upon for supply in case of a local failure of crops, the variations in prices were immense. To take a few examples: bajra at Kaira (Gujarat) was selling in 1812 at $7\frac{1}{2}$ seers per rupee, while by 1815 it had fallen to 31 seers; rice at Salem (Madras) was selling at 75 seers per rupee in 1832, but in 1833 it was as high as $33\frac{1}{2}$ seers; also jowar at Dhulia (Khandesh) fell from 19 seers in 1846 to $85\frac{1}{4}$ seers in 1848.[3] Of course these violent fluctuations in different parts of the country had no corelation whatever with each other. There was a terrible famine in the Deccan and also in Rajputana in 1802-4, but the price of bajra in

carried on bullocks and not in carts. J. F. Royle, *Culture and Commerce of Cotton in India*, pp. 82-3 (1840).

[1] Quoted by J. F. Watson, *Plan for an Industrial Survey of India*, p. 5, footnote (1872).

[2] ibid., p. 5.

[3] Taken from the Memorandum on Prices by Mr Pedder in the *Moral and Material Progress Report* for the year 1882-3.

Gujarat did not rise higher than 27 seers to the rupee. But an even more striking instance is that, in the terrible famine in the North-West Provinces in 1833, the price of wheat at Agra ruled at $13\frac{1}{4}$ seers per rupee, but this had no effect on the Khandesh prices, where there was plenty in that year and wheat was selling as low as 61 seers to the rupee. In such conditions, what would now be considered merely as a local scarcity, became a famine, and the mortality on account of these famines was sometimes terrible.[4]

The agricultural population of India was by far the most important, but the industrial population was also widely distributed in the villages. The predominance of agricultural economy meant that the proportion of the urban population in India at this time was small. The urban population could not have amounted to more than 10 per cent of the total population, and even many of the so-called towns were merely overgrown villages.[5] Most of the towns in India owed their existence to one of the three following reasons: (i) They were places of pilgrimage or sacred places of some sort; or (ii) they were the seat of a court, the capital of a province; or (iii) they were commercial depots, owing their importance to their peculiar position along trade routes. Of these reasons, the first two were by far the most important. Striking examples of the first class of towns were Benares, Allahabad, Puri, Gaya, etc. These, as long as the religion on account of which they attained importance was widely prevalent, enjoyed a period of almost uninterrupted prosperity. But, as in the case of Bodh Gaya, the disappearance of the religion connected with the place meant also the decline in its importance. The large majority of these places of pilgrimage were Hinduistic, and the most important of

[4] Major-General Briggs in his evidence before the Parliamentary Select Committee said: 'The 1823 grain in Khandeish had fallen from 6*s* to 8*s* a quarter. At Aurangabad it was 34*s* a quarter and at Poona as high as 64*s* to 70*s* a quarter; but in consequence of a monsoon and the want of roads the grain from Khandeish could not reach Poona.' Quoted by W. R. Cassel, *Cotton in the Bombay Presidency*, p. 297 (1861).

[5] This is a mere conjecture in the absence of any statistics. The figure is given on the supposition that the proportion did not differ widely from that in 1872. For though there were remarkable instances of decay since the beginning of the century, e.g. Murshidabad, there was a counter-balancing growth, e.g., in Bombay, Calcutta, Cawnpore, etc.

these had enjoyed an almost continuous prosperity till the nineteenth century, for a period of many centuries. But this class of towns was naturally restricted in number and, of course, did not admit of an indefinite increase.

The group of towns, which originated in the establishment of a court, was by far the most important and most numerous of the whole; the court might be an imperial court, or it might consist only of the retinue of a petty chieftain controlling a small province, but in either case the nature of the town was the same.[6] The one remarkable characteristic of all these towns was their liability to crumble away rapidly as soon as the prop of the court was withdrawn. One may illustrate this by examples from the small tract of the Deccan. The old capitals like Paithan and Devgiri became unimportant and decayed as soon as the Hindus lost their power. Then followed the Muslim dynasties of Ahmednagar, Bijapur and Golconda. Bijapur, at the height of its prosperity, was reckoned to be second to no city in India, but, with the fall of the Adilshahi dynasty, all its old glory suddenly vanished and only the monuments remained. Indeed all the characteristics of urban life in India were determined by this factor of the influence of the courts. The town depended entirely on the nobles and their retinue, and was often merely a semi-permanent camp.

The last class of towns were the trading or the commercial towns. These towns owed their importance to their peculiar position along trade routes. Mirzapur is a very good example of this class. It depended for its prosperity on its trade with central India and Bengal. It was a very important post on this trade route, owing to the fact that it was the highest navigable point on the Ganges. Therefore a very great proportion of the cotton export of central India passed through this point. This class was certainly not a numerous one,[7] the internal trade of India during this period was not very large,

[6] W. H. Sleeman, *Rambles and Recollections*, edited by V. A. Smith, vol. II, chap. viii (1893).

[7] For example, of towns over 20,000 inhabitants in the North-West Provinces in 1891 only six owed their origin to trade, and of these many, like Cawnpore, had attained importance in very recent times. See *Report of the Census of North-West Provinces* (1891).

and therefore its importance was restricted. But the commercial towns were certainly a little more stable than those which depended on being seats of courts.

From an economic point of view, the dominant trait of Indian towns was their non-industrial character. By this is not meant that the Indian towns at this time had no industries, but rather that the industries were not the cause of their importance. There were certain industries always in every town; these depended on its nature. In Benares, a place of pilgrimage, we find the importance of brass and copperware and bell-metal industries; the wares turned out were largely sacred vessels (for holding Ganges water, etc.) and utensils used in worship, etc. In all towns depending for their prosperity on courts, we find that the luxury industries predominate; and, as this was the most important class of towns, the nature of urban industry was thereby determined. Thus the wire and tinsel industry, the weaving of fine textiles of all kinds, embroidery, fine gold and silver work, stone, ivory and wood carving and many other artistic handicrafts reached a high stage of excellence in the towns; but the staple products, necessary for the common people, were all produced in the villages. The towns had only one kind of industry, the art and the luxury industry; and these depended for their continued prosperity, essentially, on the demand of the nobles and the court. The existence of the court was essential for the industry. The urban industry could not exist independently of the courts. Thus it was that, with the withdrawal of the court, the whole economic structure of urban life collapsed. Two examples of such a collapse during the nineteenth century might be cited. The first is Lucknow, the capital of the Nawabs of Oudh. The province was annexed in 1856, and the court of the Nawab naturally disappeared. Mr Hoey describes the effects thus:

> 'It is believed that, for a few years after the Mutiny, the population of Lucknow suffered a sudden decrease. All persons, connected with other parts of the province and of India generally, whom accidents of service had brought to Lucknow, left it. That section of the population, who were attached to the city by the special conditions of trade under

native rule, also left.'[8] The second example is Tanjore. The following extract is taken from the *Madras Census Report of 1891*. 'There can be little doubt that it [Tanjore] has declined since the death of the last Rajah in 1855. The existence of a court, *even though a titular one*,[9] exerts a considerable influence upon the population of the town in which it is held, as it attracts numbers of all kinds of professions, and in India a still larger number of Brahmins.'

All the characteristics, above described, of Indian economic conditions during the earlier half of the nineteenth century, were also found in most countries during their corresponding stage of industrial development. But there was one feature of the village community in India, which has no close parallel anywhere else. The institution of the village community, no doubt, is one which was once common almost all over Europe and Asia. The form which it took in India was, however, peculiar—being found all over the country except in the eastern portion of Bengal and in Assam. Inasmuch as nearly 90 per cent of the population lived in villages the constitution of the village was the most important factor in India's social structure. The village community has affected the development of India in various ways. For example, it was perhaps this peculiarly self-sufficient structure of the village that preserved the civilization of India through the many invasions and the many changes of rulers and Government.[1] But we are concerned here with pointing out its salient points in connexion with the economic structure.

The Indian village on account of the difficulty of communicating with the outside world was, of course, an almost entirely self-sufficient unit. All the main needs of the community were satisfied locally. It was only for such things as salt that recourse was had to an outside market, and in the case of small villages such luxuries as ornaments could not

[8] W. Hoey, *A Monograph on the Trade and Manufacturers of Northern India*, part II, p. 29 (1880).

[9] Italics mine.

[1] 'These communities contain in miniature all the materials of a state within themselves and are almost sufficient to protect their members if all other government were withdrawn.' Elphinstone, *Report on the Deccan*, etc., quoted by R. C. Dutt, op. cit.

be procured in the village itself. The following description of the typical village will bring this out: '. . . Such industries as are necessary to supply the simple needs of the village are prosecuted in the village itself. The Punjab village is eminently self-sustaining, it grows its own food, it makes its own implements, moulds its own domestic vessels, its priests live within its walls, it does without a doctor, and looks to the outside world for little more than its salt, its spices, the fine cloth for its holiday clothes, and the coin in which it pays its revenue.'[2] What is said here of the Punjab village applies with equal force to the villages all over India. It must be noticed that, at the beginning of the nineteenth century, when cash payments of revenue were almost unknown, the village was even more isolated than it is shown to be in the above picture.

The mere fact of the isolation of the village is not striking in itself, nor was the fact that all the artisans lived in the village peculiar. But the peculiar feature of the Indian village community was that the majority of the artisans were servants of the village. These different artisans had usually their own plots of land, which they held from the village rent free, or at a reduced rental; and one of the chief sources of income of these artisans consisted in the fixed share of each year's produce, paid to them by each cultivator. For this they were required to render certain services to the body of cultivators.[3] Thus a carpenter was required to repair all agricultural implements and make most of them for each cultivator without any further payment. It was only for such things as the sugar-press or the cart that he was paid anything extra. The dues and the duties of this village servant class of artisans differed from one part of the country to another.[4] But, though these differed, the remarkable feature

[2] D. Ibbetson, *Report of the Census of the Punjab*, p. 18 (1881).

[3] This was the arrangement in cases where the village was a group of independent cultivators. The slight modification which was found in the case of landlord villages will be noticed later.

[4] The differences were not only in the dues and services but also in the artisans who were servants of the village, for an artisan who would be a village servant in one part of the country would be an independent artisan in another part. For the different parts, see W. Crooke, *North-West Provinces*; Sleeman, op. cit., vol. I, pp. 73-4; Grant-Duff, *History of the Mahrattas*, edited by S. M. Edwardes, vol. I.

of the artisans being village servants was to be found everywhere. Not all the village servants were artisans, for this group also included in many parts the headman, the priest, the accountant, etc. Neither were all artisans village servants. For example, the weaver was nowhere a village servant. But artisans whose services would be regularly required by all members of the village community, generally, formed the artisan group of the village servants.

This system gave a peculiarly compact form to the Indian village community and for that very reason it was well able to resist outside attacks. The office of the village artisan being hereditary, it stereotyped the whole life of the village. It was no doubt a very good device for insuring that the services required for the village would be regularly provided for, especially during troublous times, but, at the same time, it insured against progress in the methods of the artisans. To begin with, the artisan, who did all the miscellaneous duties connected with his occupation in the village, did not specialize, and the division of labour was extremely limited. The proficiency, therefore, of the artisan in his craft could not be expected to be great.[5] It also effectively protected the artisan from the pressure of external competition. For a cultivator was not likely to buy his pots from an outside potter—even though his wares were superior—if he had been paying the village potter to supply them to him. This same absence of external competition resulted in an entire absence of localization of industry in India. Indeed, except in the artistic wares—which were produced in the towns—there was no localization of industry in India.[6] The lack of communications alone does not account for this; for in Burma, where the difficulties of transport were also great,

In the south the arrangement was a little peculiar, for in the group of 'Panchalas', i.e. the five smiths, the artisans followed any profession within the group they pleased (see *Report of the Mysore Census*, 1891); such interchangeability was not to be found in the north.

[5] Sometimes his methods were very bad and this fact helped in some parts, when the communications grew, to break down the system. Of Chhatisgarh carpenters we read: 'The implements used are so rough that the cultivators generally prepare their own or if pushed make for the nearest town.' *Report of the C.P. Census* (1891).

[6] A slight exception might be made in the case of weaving. In this in some parts of the country there were centres which were famous in surrounding tracts for their specialized products.

there was localization to a small extent in the areas of small groups of adjacent villages.[7] But in India even this was almost entirely non-existent. Thus, with very little division of labour, and almost no specialization in products at different places, the state of the Indian rural industry was very backward.

The village community, with its peculiar constitution, was the most interesting and the most important feature of Indian economic life. The towns were not very influential. They were almost as something apart from the general life of the country. Thus India was characterized by an aloofness from the outside world; it consisted of an immense number of entirely self-contained and self-supplying units with little contact with each other and practically no knowledge of the outside world.

[7] The contrast here with Russia, with whose village communities the Indian village is often compared, is striking. Mavor mentions whole villages of blacksmiths, wire drawers, etc.; this was impossible in India. He also says, 'The products of these village artisans were intended for sale. Specialization of village production rendered this course necessary and the wide market with facilities of trading rendered it possible' (p. 530). J. Mavor, *Economic History of Russia*, vol. I, book 3, chap. iii. Such peasant industries did not and could not exist in India.

For Burma see *Report of the Census of Burma* (1911), also Bell, Monograph, *Iron and Steel in Burma* (1907): 'Another development [of the blacksmith's industry] is to be seen in Mindan village where every household depends more or less on its smithy.'

CHAPTER II

The Agriculturist, 1860-80

THOUGH the contact and commerce of India with the West had been going on for many centuries, this had not affected India's economic structure at all till the nineteenth century. It was only after the series of inventions that led to the application of mechanical power to manufacture on a large scale that the English industrialist gained a considerable advantage over the Indian artisan. It was at about the same time that England acquired a large portion of India, and that new administrative and judicial systems were introduced into the land. These latter had in many parts the effect of depressing the condition of the people, or of undermining old institutions like the village community as a self-contained administrative unit. But they left the industries and the industrial organization of India much where they were before. The competition of the English industrialist, however, was a more important factor. But even though the foreign manufacturer was able to beat the Indian artisan in this competition, the entire lack of communications in the interior of India sorely handicapped him, and during the first half of the nineteenth century, the only industries that were seriously affected by foreign competition were the Dacca muslin industry, the Bengal silk manufactures industry, and the Bombay and Bengal shipping industry. Even so, there is reason to doubt how far the decline in the first two can be directly attributed to external competition. In the direction of the establishment of new industries and improvement of agriculture, this contact had not as yet borne much fruit.[1] The chief results of this nature were the spread of the cultivation of jute in Bengal for exportation in about

[1] Sericulture was also an industry specially developed by the East India Company, but its development was of a forced nature. During the Napoleonic wars, when the regular supply of raw silk from Italy to England was cut off, this industry was fostered by the Company in Bengal. The artificial nature of the growth is shown by the fact that, as soon as the

1830, the beginnings of the export of cotton and the introduction of some exotic varieties. The mass of the population, generally speaking, were as yet unaffected. They felt the foreign rule, they felt the heavy assessments, they felt the decay of old institutions, but they did not feel the competition of foreign goods or other external forces effectively enough to induce them to change their industrial methods or organization.

It was not till 1850 that the volume of India's foreign trade began to increase rapidly as the result of the improvement of ocean steamers and the extension of roads in the interior. The fifties saw the beginnings of railway enterprise in India; the latter part of the decade witnessed large accessions to territory directly under British rule, and also the disappearance of the East India Company and the transfer of Indian Government to the Crown. This was an eventful decade indeed, and the changes that were heralded by so many important events were to be of enormous importance in the economic history of India.

The first event, in the western world, to act on India suddenly and to have a very important economic effect was the American Civil War. It was now shown for the first time how very near to the markets of the West India had been brought. This also was the first important event to force upon the notice of the cultivator the important fact of the existence of these markets.

The history of cotton cultivation in India is a long one; but, though the cultivation of cotton in India was practised from very early times, the export of raw cotton from India is a comparatively new thing. Before the nineteenth century India was chiefly famous 'for exporting her elegant fabrics to the most civilized nations in the world'.[2] The inventions of machinery for spinning and weaving and the consequent competition of cheap goods had considerably diminished the exports of these 'elegant fabrics', and also at the same time revealed the possibilities of India as a supplier of raw cotton. Though, as late as 1780, America as a producer of raw

Company withdrew their active support (in 1836), the industry began at once to decay. See J. Geoghagen, *Report on Silk in India* (1874).

[2] J. F. Royle, *Culture and Commerce of Cotton in India*, p. 20 (1851).

cotton was quite insignificant, her progress since that date had been remarkable, especially after the discovery of Whiteney's new saw-gin; and by 1830 she became the principal supplier of cotton to the growing English industry. At this date India's exports of raw cotton were very small. Dr Royle writes: 'It forms but a small part of the imports into this country [England], but a more conspicuous factor in those of China; the two quantities together, however, make but an insignificant portion of what is produced in the country. For it may be seen cultivated in patches in almost every part of its wide extent, in some provinces forming nearly one-fourth part of the "khureep", or wet season crop, and necessarily an important item in the agriculturist's return.'[3] Until about 1860, these exports, though on the whole slightly increasing, remained curiously fluctuating. But already the British cotton manufacturers had their attention drawn to India as a possible source of supply of the raw material for their industry.[4] A failure of the cotton crop in America in 1846 showed to them the instability of this source, and they were busy finding an alternative in case of emergency. Royle, after writing of the old manufactures of India, goes on to say: 'In the present day, however, we often hear of the country talked of only in the light of a cotton farm, whose business it should be to supply the raw material to England whenever it is required, and to take back her manufactured goods in any quantities that the manufacturers choose to send.'[5] But many causes, notably the short staple of the Indian cotton, the enormous admixture of dirt in the cotton, the difficulty of communications and also the want of a stable export market, had prevented the exports of raw cotton from India from rising hitherto to great height.[6] Then came the American Civil War; the ports of the south were closed and there was a cotton famine in

[3] Ibid., p. 18.

[4] The growing interest taken in India's cotton supply is shown by the number of books that appeared about this time on the subject. Chapman, the founder of the Great Indian Peninsula Railway, lays great emphasis on this point of making accessible the Indian cotton supply in his advocacy for the rapid extension of railways in India. See J. Chapman, *Cotton and Commerce of India* (1851).

[5] Royle, op. cit., p. 20.

[6] ibid., see also W. R. Cassel, op. cit.

Lancashire. Naturally the English manufacturers turned to India.[7] The effects of this creation of a sudden demand for Indian cotton were truly enormous. The Government undoubtedly exerted itself vigorously in the matter by the appointment of Cotton Commissioners for Bombay and the Central Provinces, by pushing forward construction of roads and railways and other measures; but the cultivators also were very quick to seize the opportunity of making extra profit. The price of cotton had risen greatly and the growing of cotton became suddenly very paying. This enormous rise in the price of Indian cotton is shown clearly by the following figures.

Price of Indian Cotton in Annas and Pies per lb.

1859	1860	1861	1862	1863	1864	1865	1866
2-7	3-7	4-2	6-5	10-5	11-5	7-1	6-2

It will be seen that the price of cotton had risen more than threefold during the course of four years. The trade in raw cotton also naturally rose to extraordinary heights on account of this rise in price, and the quantity available for export to the United Kingdom was more than doubled within these four years.

Imports of Raw Cotton into the United Kingdom from India (in Bales)[8]

1859	1860	1861	1862	1863	1864	1865
509,695	562,738	986,280	1,071,768	1,292,984	1,399,514	1,266,513

The rise in price combined with the increased quantity made the value of these exports formidable; and for a few

[7] *Correspondence on the Subject of Cotton Cultivation in India* (1863) (Parliamentary Paper).

[8] Statistics taken from the article on Cotton (*Gossypium*) in G. Watt, *Dictionary of Economic Products of India.*

years after 1864 their value formed more than half of the value of the total exports from India.

The enormous effects of the American Civil War—especially in the cotton-growing tracts—might be profitably illustrated by some extracts from the valuable reports of Mr Rivett-Carnac, the Cotton Commissioner of the Central Provinces and Berar. After describing the manifold difficulties in the way of the cultivator before 1860, he goes on to say: 'Suddenly, as if by magic, these obstacles were effectually and simultaneously removed, and the cotton trade as it was carried on in 1864 in central India is hardly to be recognized by the side of the business as it is done in our markets today. Whilst the railway, slowly but surely, was working into the heart of the country, the position of the cultivator was undergoing a great and decided change. The operations of the Land Revenue Settlement relieved him of all anxiety regarding his tenure . . . and finally the American Civil War, by raising the price of cotton and pouring into the ryot's hand what appeared to him untold wealth, enabled all those who were not utterly reckless and extravagant to free themselves from the meshes of the money-lender's hands.'[9] The figures[1] for the extension of cotton cultivation in the Central Provinces given by the Cotton Commissioner are:

Years	Acres	Years	Acres
1861–2	375,623	1865–6	587,398
1862–3	427,111	1866–7	598,801
1863–4	488,436	1867–8	735,633 } Includes about 100,000 zemindary
1864–5	691,198	1868–9	750,875 }

These benefits of the American War were, of course, equally extended to all the cotton-growing tracts.[2] In

[9] *Annual Report of the Cotton Commissioner for C.P. and Berar for the Year 1867-8*, p. 132.

[1] ibid., *1868-9*, p. 3.

[2] These benefits might be said to have widely extended all over India, for, except Bengal, almost every province of India had large areas under cotton at this time.

Madras 'the ryots in the single district of Bellary alone made $1\frac{1}{2}$ millions sterling by the sale of cotton in the three years of the American war';[3] while in the Bombay Presidency the effects are described thus: 'In 1862 began the period of extraordinary prosperity, caused by the rise in the price of cotton, which followed the American blockade. In those years the ryots would under ordinary circumstances have suffered severely from the constant deficiency in rainfall during five successive seasons. But the abnormal value of the produce made the scanty crop of a year of drought equal to the full crop of a good season.'[4]

But the real importance, in the economic sphere, to India lay not so much in raising the price of cotton and thus bringing about a temporary period of prosperity, but rather in bringing home to the cultivator the fact that causes other than local needs were beginning to govern the nature and extent of the crops he sowed. Briefly, it was the event that most clearly and dramatically revealed a break in the economic isolation of India.

The rapidity with which the demand for cotton from England was met by India was only made possible by the many measures of improvement which had been undertaken in India during the past decade. Chief among these was the extension of roads and railways. The appalling state of communications before 1850 has already been described. Till about 1845 very little had been done to forward road construction in India. In the Madras Presidency after this date a certain amount of expenditure towards the construction of roads was sanctioned. Though this money was spent, the construction of roads was but little advanced till after the Report of the Commissioners (1852). A road to Agra from Bombay was commenced in 1840; while in the Presidency itself, except for the road over the Bhor Ghat to Poona, little had been accomplished. The trunk road in the north was only from Calcutta to Benares, and even this was in a bad state. About 1850 the extension of this trunk road to Delhi was undertaken and the work was completed by 1853. But the real progress in road-building was begun under the

[3] Raghavaiyangar, op. cit., p. 39.
[4] *Report of the Committee on Riots in the Deccan*, etc., p. 21.

vigorous Governor-Generalship of Lord Dalhousie by the newly formed Public Works Department. The trunk road to Delhi was completed and its further extension to Peshawar was vigorously begun.[5] Road-building thus really began in the fifties. After 1857 the necessity of roads for military purposes and also as feeders for the great railway trunk lines was realized and the next decade saw a rapid extension of roads in India.

But this work was now overshadowed by the even more important work of railway extension. The question of railway building in India was broached as early as 1845. But when private companies were formed capital was not forthcoming. Then ensued the long series of negotiations between the companies and the East India Company on the question of a state guarantee.[6] These did not bear much fruit until the time of Lord Dalhousie's Governor-Generalship. Lord Dalhousie interested himself in the extension of railways in India and wrote two very able minutes on the subject, in one of which he sketched the routes which trunk lines in India should take.[7] An experimental line had already been undertaken near Calcutta in 1849; and in 1854 the first line of railway in India—from Bombay to Thana—was opened for traffic. From this date the work was pushed on vigorously until 1857, when it was temporarily checked. The ten years following saw a remarkable growth of railways in India; the work was carried on continuously and the length of miles open for traffic had been increased from 432 miles in 1859 to 5,015 miles in 1869.

It is not necessary here to discuss the system of guarantee and control by which railway construction was inaugurated in India. The first obvious effect of railways was, of course, that of making communication quicker, and for long journeys much cheaper. This was very important, as it was the extension of railways and roads that made possible the carriage of cotton in large quantities from the fields to the seaports. But during the decade 1860-70 it had another effect which is also very important. Before this time a class of

[5] J. Briggs, *India and Europe Compared*, chap. i, part iii (1857).
[6] H. Bell, *Railway Policy in India*, chap. i.
[7] W. W. Hunter, *The Marquess of Dalhousie*, chap. vii (1890).

general casual labourer as such was almost unknown in India; such a class was non-existent because there was no demand for it. In old times the smaller works of utility, e.g. small canals etc., were mostly built by the co-operative labour of the people in the tract and the bigger works and also works such as the building of temples, monuments, etc. were generally constructed by forced labour of the cultivators of the surrounding country. During the regime of the East India Company the number of big public works had been comparatively small; but the number of such works undertaken after the formation of the Public Works Department by Lord Dalhousie and especially after 1859 was very remarkable.[8] This naturally meant the employment of very large numbers of ordinary unskilled labourers throughout the country. The main classes from which these labourers were recruited were the agricultural labourers, the poorer classes of cultivators, who were glad to have an opportunity of supplementing their earnings in the off-season of agriculture, and also a certain proportion of village artisans, especially weavers, who were now beginning to feel the effects of foreign competition. A natural result of this sudden demand for unskilled labour was a general increase in the wage rate. This rise in the wages was very large. The Committee on the Riots in the Deccan say in their *Report*: 'The competition for labour made it possible for the ryot to earn the assessment of an ordinary holding by a fortnight's work,'[9] and further, in more detail, the ryots drew large sums from the competition for labour by migrating for a time to Poona or Bombay, where the labour available was employed at extravagant rates. The monthly wages of a common cooly in Bombay rose from Rs 7-12-0 in the period 1860-62 to Rs 13-8-0 in 1863. During the construction of the railway about 25 lakhs of rupees were spent in the area of the disturbed villages in payments to such as would remain in the district.[1] Outside the district itself but only 60 miles distant the works on the Bhor Ghat gave employment to

[8] These were of a varied class, such as railways, roads, irrigation works, Government buildings, military barracks, etc.

[9] op. cit., p. 21.

[1] The area in which the subsequent riots took place.

thousands: one contractor on a line of 14 miles employed nearly 40,000 labourers. Following on this after a short interval came increased expenditure on public works, rising in 1868-9 to 31 lakhs on public works and irrigation in Poona district alone.[2] The above clearly shows the effect on the wages in every district in which railway or other public works were begun; it also shows the phenomenal growth during the decade of such expenditure by the State. In the Madras Presidency 'there was a considerable improvement in the condition of non-agricultural labourers also, as, owing to the construction of several railways and other public works, the demand for labour was great and continuous, and the rise in wages kept pace with the rise in the price of food-grains'.[3]

This indicates a tendency of prices to rise at about this time. The prices of food-grains and other products in India fluctuated enormously in all parts of the country during the first fifty years of the nineteenth century; but through all these fluctuations there was one common tendency, and that was of the prices to fall. The common, and generally accepted, explanation of this phenomenon was the introduction of money economy in the country, especially the introduction of cash payments of Government assessments. India never produced any large amount of the precious metals, and so the quantity of bullion in currency at the beginning of the nineteenth century was very small. But this small amount was found quite enough for the purpose of the trade, inasmuch as most transactions were conducted by barter, and the volume of trade transacted with metallic currency was extremely small. With the introduction of the system of paying Government assessments in cash, the demand for money, especially just after harvest time, increased greatly. Thus the 'duty' thrown on the amount of currency in the country largely increased, and the prices of all commodities began to fall. This general fall in prices continued till about the middle of the century, when a reverse tendency began to operate. It was about this time that the discovery of gold mines in Australia and California and of silver in Mexico

[2] ibid., pp. 47-8.
[3] Raghavaiyangar, op. cit., p. 39.

suddenly increased the world's supply of precious metals; and it was about this time that the foreign trade of India was increasing by leaps and bounds. A large quantity of these precious metals, therefore, necessarily found their way to India and set up a general movement towards an increase in prices.[4] The following provincial averages[5] indicate the extent of this tendency.

Prices of Food-Grains (seers per rupee)

Year	Rice Bengal	Wheat N.W.P.	Wheat Punjab	Jowar Madras	Bajra Bombay
1861	27·07	18·45	19·23	25·54	21·55
1870	22·74	15·5	15·13	22·68	13·2

Another tendency, equally well marked, was that of prices in different provinces to correspond and the tendency of price movements in one part to affect the movements in another. This was especially noticeable in times of famines. Thus Mr Henvey says in commenting on the ease with which the famine area in 1868-9 was supplied with food-grains from other parts of the country: 'It must not be forgotten that while railroads, and other means of easy communication, lessen the danger of local famines, they also tend to widen the area in which high prices prevail.'[6] This only shows the action of the tendency of equalization of prices in times of famines.

Fortunately this decade was comparatively free from famines. The nature of a famine in India is very important, as it was then, and in a modified form it is even now, a prominent feature of India's economic life. It has been insistently remarked by all writers on Indian famines that a famine does not involve so much a lack of food, as a lack of employment. But this is a statement which does not hold good of famines in India before the means of transport were

[4] Pedder, 'Memorandum on Prices', op. cit.
[5] J. E. O'Connor, *Review of the Prices and Wages in India* (1886).
[6] F. Henvey, *Narrative of the Drought and Famine in N.-W. Provinces*, 1868, 1869 and 1870.

improved. Famine then meant a lack of food as well as a lack of employment. For, as late as the Rajputana famine of 1868, people had to go without food even though they had the means to buy it, through an absolute lack of supply. The same fact is indicated by the large migrations of people from the famine districts to districts well provided with food, which invariably occurred in Indian famines of the early nineteenth century. Because the food was not to be had in their district the people had to migrate to districts where there was an abundant supply. Even in the famine of 1860-61 in the North-West Provinces, when the means of communication were much better than they had been before, extensive migrations took place; and although in the tract, as a whole, the supply was enough to go round, in the worst districts this was far from being the case. Here the practical question was then 'not so much how to get food, as how to get the starving people to the food or the food to them in the cheapest and the most expeditious way possible'.[7] The nature of the country in this case and the comparatively good means of transport enabled the food to be brought to the people. But, 'in cases like the Rajputana famine, in which distress is widespread and where no railroad or water carriage exists to bring the produce of distant countries to each person's door, the lives saved by human means are only few compared with those who perish'.[8] What the condition of Rajputana was in 1868, was the condition of the whole of India before 1850.

The decade 1860-70, which saw so many changes in the economic sphere in India, saw also a change in the nature of Indian famines. Henceforth, the Indian famine meant no longer an appalling lack of food, but only scarcity prices and a universal lack of employment. The famines that actually took place in the decade, though they involved a terrible increase in mortality—especially in 1868-9—were not very widespread nor very severe. The mortality also would have been much less if Government officers had had at their command the very well organized system of famine relief which was evolved later on during the century.

[7] R. Baird Smith, op. cit. sec. i, p. 13.
[8] Henvey, op. cit., p. 97.

The rise in the price of cotton, consequent on the American Civil War, was a source of profit to all the cultivators of all the cotton-growing tracts, and so also in a smaller degree to cultivators of all parts. At the same time the expenditure on public works was raising the wages of labour; but the condition of the farm servant, on account of his being paid in kind, was not much affected either by the rise in the price of food-grains or by the rise of money wages.

The reaction from this period of prosperity had begun as early as 1865 in the Madras Presidency. There was a slight famine chiefly felt in the Ganjam district. It is to be noted that, as the cotton boom had not passed as yet, the Ceded Districts, which grew cotton, did not feel the drought, though under ordinary circumstances they would certainly have suffered from it severely. After the Madras famine, the Rajputana famine (1868-9) followed. In this famine the mortality was very great, proportionately greater than in almost any other modern famine. There was a complete failure of the kharif crop of 1868, and, to make things worse, next year followed with a plague of locusts. Fortunately the famine was not spread over a very wide tract. It was confined to Rajputana and the adjoining districts of the North-West Provinces. The difficulties of the situation were very great as there was an almost complete lack of communications in the interior of Rajputana. This was, perhaps, the last famine in India in which the scarcity of food, as such, was severely felt. All the characteristics of the old Indian famine were brought out in this case. There were vast masses of people moving at random out of Rajputana in search of food, work, and fodder for their cattle. The nearest cities in the North-West Provinces such as Agra and Delhi were blocked with famine-stricken people who were driven out of Rajputana. In this aimless wandering in search of food, a great number of people lost their lives, but the mortality among cattle was even greater. It is estimated that the majority of the cattle of Rajputana perished.[9]

Then famines quickly followed each other. First was the famine in Bengal and Bihar (1873-4). It can be said that the

[9] *Report of the Indian Famine Commission* (1880), part ii, 'History of Past Famines'.

modern methods of famine relief were first put into practice on a large scale in this famine. Famine works were opened all over the district, and relief was freely given. The officers had been so much impressed by the terrible loss of men and cattle in Rajputana that they were resolved not to let any man suffer for want of relief. The result was a relief administered extravagantly. On an average about 26 per cent of the total population of the famine districts were relieved, and, in some, the percentage rose as high as 50 or 70. Government prohibited the export of grain from the tract, and once when it was feared that private trade was not active enough, it imported grain largely on its own account. The expenditure on famine relief was excessive, but it must be said to the credit of Government that there was no death from starvation.[1]

It was in the latter part of this decade that the series of famines covering almost the whole of India occurred. The famine was severest in south India, covering the major portion of the Presidencies of Bombay and Madras, the Nizam's Dominions and Mysore and lasting from 1876 to 1878. At the same time a slight famine was felt in the North-West Provinces and Oudh. As usual in Indian famines, the rainfall in these tracts had been short and irregular for several years before the actual drought occurred. Thus the stocks of grain in reserve were very low. In the North-West Provinces, where the earlier season had been favourable, the stocks had been greatly depleted by exports of wheat to Europe, as the wheat trade, on account of the opening of railways, was now growing rapidly. When the famine came, it found the country entirely unprepared for it. The miseries of the people were greatly aggravated by the fact that a very usual feature of the famines in India is the complete lack of fodder. What this meant to the people can be realized only when we consider what a great proportion of the capital of the peasant is usually invested in his cattle. Relief works on a large scale were opened all over the country, but still a large stream of people steadily emigrated from all parts of south India to the Western Ghats. This emigration differed from that which took place in the Rajputana famine,

[1] ibid.

inasmuch as it was an emigration in search of fodder in the forests of the Western Ghats and not of food for the people themselves. Of food there was no actual lack. The railways and the activity of the traders in grain had distributed the available food supply all over the country very quickly. It was only in some parts of the Bombay Carnatic, to which the railway system had not yet been extended, that any actual dearth of food was felt. This famine was so widespread and terrible that the Famine Commission of 1880 described it as the worst experienced since the beginning of British rule in India.[2]

The course of famines in the decade 1870-80 has been sketched above briefly, because the consequences of a famine were economically very important to India. It was especially so in this decade. Since about 1850 India had enjoyed a fairly long period of immunity from famines, and as pointed out above the conditions all tended towards a prosperous state of trade and agriculture.

The first and the most apparent effect of the famine on the country was in the rate of increase of the population. During the decade 1872-81 the population of India, as a whole, increased by 6·85 per cent.[3] But the increase was extremely irregular. As there had been no regular census before 1872 it is impossible to decide the exact rate of increase in the different provinces, but the figures for the increases in the famine-stricken provinces bear eloquent testimony to the effect of the famines.

Bombay (British): increase of 2·05 per cent in 9 years.
Madras Presidency: decrease of 1·35 per cent in 9 years.
Mysore: decrease of 17·19 per cent in 10 years.
Cochin State: decrease of 0·14 per cent in 6 years.

As there was no census of the Nizam's Dominions in 1872, figures for this tract are not available. The Bombay Presidency shows an actual increase only because the whole of the northern portion of this Presidency was unaffected by the famine. But even these figures do not convey the entire

[2] For a detailed account of the measures of relief taken and the different controversies, especially about the reduced or 'Temple Wage', see W. Digby, *Famine Campaign in Southern India.*

[3] W. C. Plowden, *Report on the Census of India* (1881).

result. For example in the Madras Presidency everything points to the fact that the years between 1856 and 1876 were very prosperous and that there was considerable increase in the population during this period. According to Dr Cornish, during these twenty years the population of the Presidency rose from twenty-three to thirty-one and a half millions.[4] In the 1871 figures there were some omissions and therefore the real check to population was even greater than shown by the above figures. Another fact, which indicated this, was the diminution in the number of inhabited villages and the percentage of the houses occupied. In Madras Presidency the percentage of unoccupied houses rose from 6·11 per cent in 1872 to 11·71 per cent in 1881. It is not so much due to the deaths on account of starvation that the population figures suffered; deaths from actual starvation were comparatively few in the 1876-8 famine. But the check to population came mainly from two results of the widespread under-nourishment of the people in famine times. The lack of sufficient food checked the birthrate during times of scarcity, and the same deficiency, by emaciating the people, made them very easy victims of the epidemics of fever, cholera, etc., which are the invariable companions of famines in India.

Yet another effect of the famines, which was much more disastrous to the prosperity of India, was the setback to agricultural progress that a severe famine always meant. A curious proof of this fact is that the methods of cultivation are generally the worst in those parts of India which are most liable to periodical failures of rainfall. The expectation that a famine is bound to occur in a certain number of years acted as a hindrance to the cultivator's desire to improve his land or his cattle. This question of livestock was very important. In most parts of India a very large proportion of the cultivator's capital was in the form of his draught cattle. But it was a form of investment that was most liable to suffer in times of famine. It has been mentioned that during the years 1876-8 there was a general movement of people to the Western Ghats in search of fodder. Government, by

[4] L. MacIver, *Report of the Census of the Madras Presidency* (1881).

opening the reserved forests to public grazing and by establishing fodder depots on the main routes towards the Ghats, did a great deal towards saving the livestock of the country. But in spite of all the efforts of the people and Government a very large proportion of the cattle died during the famine.

Famines undoubtedly played a very important part during this decade in India. They certainly caused a great deal of distress, but there were many other causes also at this time which contributed towards depressing still further the condition of agriculturists. The various factors that tended to create the elusive prosperity of the last decade have been detailed above; but that the prosperity was mainly founded, at least in the Bombay and Madras Presidencies, on the rise in the price of cotton is shown by the sudden reaction which followed the lowering of the price of cotton on the close of the Civil War. As soon as America resumed its export of cotton the demand for Indian cotton fell sharply and at the same time there was a general dislocation of trade in Bombay and the failure of many prominent merchants followed. The peasant also had generally failed to profit by the spell of prosperity that he had enjoyed; he had in most cases recklessly spent the money he had gained.[5] In some cases indeed, the cultivators on account of their increased credits had actually increased their liabilities. Thus with the slump in the cotton market the position of the cultivator became suddenly very bad.

At the same time the assessments began to fall heavily on the cultivator, especially in the south. It so happened that the period of the revision of assessments here coincided with the temporary period of prosperity enjoyed by the cultivator during the sixties. The revenue officers, taking the profits of cultivation then obtaining as the standard, raised the assessments generally a great deal. But when the period of prosperity had passed away the peasant naturally found it very difficult to pay his assessment and was further forced into borrowing largely.[6]

Then again there was a general depression of trade all

[5] Evidence of Mr Nowrojee Furdunjee before the East Indian Finance Committee, 1872.

[6] *Report of the Committee on Riots in the Deccan* (1876).

over the country and some of the industries especially felt the effects of the Franco-German War. The prices of food-grains, which had been constantly rising through the previous decade, became either stationary or—excepting in famine times—began slightly to fall. The State was still spending large sums of money on public works but this was not the only purpose for which it was now spending money. With Lord Northbrook's resignation in 1875 the Government of India entered on a policy which entailed more and more expenditure in military expeditions and establishments. Consequently the burden of taxation was pressing more and more heavily on the mass of the people.

All the above causes, combined with a succession of severe famines, produced a measure of distress which had not been felt by the people for many years. A very significant occurrence produced by this distress was the riot of the peasants in certain Deccan districts. In the districts of Poona and Ahmednagar of the Bombay Presidency the peasants spontaneously rose in many places and robbed and wrecked the houses of the money-lenders. In some cases even greater violence was committed. In most places the demand of the peasants was for the return of the debt-bonds. Many peculiar causes had combined to produce this disturbance. There had been a vast amount of expenditure in these districts during 1860-70 on account of public works; but these works had now been completed. This was also one of the tracts in which the cultivator had found that, on account of the cotton boom, his credit had expanded and he had utilized this fact in extending his debt obligations. Also in these parts the money-lending business was in the hands of Marwaris, a particularly unscrupulous lot of money-lenders, foreign to the province. The disturbance was put down with ease but the Committee which inquired into the causes of it found that it was due to some very deep-seated evils. It is a well-known fact that agriculturists all over the world become involved in debt with fatal ease. It was particularly the case in India where farming on a large scale is unknown to any great extent. But before the advent of the British this process was checked a good deal by the many restrictions on the transfers

of land; and also in some parts, by the State refusing to give any help to money-lenders to recover their debts.[7]

The British had given rights of free transfer and absolute ownership—especially in the 'ryotwari' tracts—to the cultivators which they had never possessed before. Again the judicial system which had been adopted gave the money-lender a great power over his debtor, and finally the Limitation Act, making the renewal of the debt-bond in short periods compulsory, made the position of the debtor much worse.[8] Thus, though there was nothing in the nature of a peculiar hardship in the mere fact of an agriculturist being indebted, these other causes acting in concert had reduced the debtor, in many cases, to the position of a virtual serf. The process of a general trade expansion, and the fact that the crops of the cultivator had begun, all over the country, to acquire a distinct market value, had expanded the credit of the cultivator. The ease with which the money could be recovered through the courts had made the money-lender more ready to lend. The process had gone on during the period of prosperity and the cultivator was quite oblivious of where he was going, but as soon as the reaction came and the money-lender began to tighten his grip on the cultivator's land, his real position was brought home suddenly to the cultivator.

The above applies, with certain reservations, substantially to all parts of India.[9] The causes given above and their effects are very important; for in this decade was thus started the movement of a gradual transference of land from the hands of the original cultivators to—in most cases—the money-lenders. The process can be termed beneficial, if at all, only in cases in which the land thus transferred was acquired by the land-owning classes or others who were careful agriculturists; but in most parts of the country this was

[7] ibid.

[8] ibid., chap. v.

[9] See ibid., Appendix A: 'Paper Relating to the Indebtedness of the Agricultural Classes in Bombay and other parts of India' (1875). For a very close parallel in the Punjab, see S. S. Thorburn, *Musalmans and the Money Lenders* (1886) and *Note on Land Transfer and Agricultural Indebtedness in India* (1895): also 'Evidence on Agricultural Indebtedness', *Report of the Indian Famine Commission* (1880).

not the case. In the Deccan, for example, the Marwari never wanted to take possession of the land; in many cases he did not have the land transferred to himself legally, but it was still allowed to remain in the old cultivator's name; the Marwari merely appropriated to himself the entire profits of cultivation by virtue of the large number of debt-bonds that he held. The cultivator had to toil hard each year and at the end of it his mere subsistence was dependent on the clemency and reasonableness of the Marwari. Thus was a great portion of the Deccan peasant class reduced to virtual serfdom. It was to combat this tendency that Government began the long series of legislative enactments restricting the right of land-transfer of which the first is the Deccan Agriculturists' Relief Act (1879).

It might be interesting to note here the chief provisions of this Act. Firstly, arrest or imprisonment for debt was abolished. This was wholly a beneficial measure, for this was the chief weapon in law, by the threat of applying which the money-lender had got such a hold over the peasant. After certain conditions had been satisfied, the debtor might be declared insolvent and free from future liability. It is a striking proof of the honesty of the peasant that this provision was very rarely resorted to. A system of village munsiffs and boards of conciliators was created to deal with cases up to a small amount and to arrive, if possible, at an amicable and reasonable settlement of the account. The courts were also bound to inquire into the previous history of the debt in the case of an agriculturist.

It might be said that during the decade 1870-80 the agriculturist all over India lost a good deal of the progress that had been made previously. In some tracts indeed his position had been very bad for a long period,[1] but a general comparative statement is impossible. The area of cultivation and the nature of the crops grown were naturally affected by the famine conditions, but whether there was a general increase in the area under cultivation or any important change in the crops is impossible to say on account of the

[1] 'Notes on the condition of the Jhansi ryot', see 'Evidence on Agricultural Indebtedness', *Report of the Indian Famine Commission* (1880).

entire lack of agricultural statistics.[2] But there is no outside evidence for supposing any such changes. Only one thing is certain; from the evidence before the Finance Committee and Famine Commission and other sources, the condition of the agriculturist at the end of this period was one bordering on extreme poverty.

[2] C. A. Elliot, 'A Note on Agricultural Statistics in India', ibid., Appendix II.

CHAPTER III

The Decline of Handicrafts

THE urban industry of India, at the beginning of the nineteenth century, was mainly in the nature of handicrafts, producing fine textiles or other luxury products for the aristocracy. Though the urban industry was thus limited in its scope and extent, it was in a way very important, for it was the best organized industry in India and also it was the first to feel, on account of its position, the effects of foreign competition.

There is no doubt that in these handicrafts Indian urban industry had reached a high-water mark of excellence. The products of Indian industry enjoyed a world-wide reputation. The 'calicoes' and the 'corahs' of Bengal formed an important item of the Indian trade in the trading days of the East India Company. The high quality of these artistic products has never been questioned. It was their special merit that while maintaining their high artistic standard they never sacrificed utility.[1] Dr Watson remarks: 'The Indian taste in decoration is in the highest degree refined. There is no waste of ornamentation . . . nor is there any lavish expenditure of ornament which so often purchased *show* at the expense of comfort.'[2] A Frenchman, M. Blanqui, when he saw the Indian section of the Great Exhibition of 1851, paid a high compliment to Indian craftsmen when he said: 'Les Indiens sont les Français de l'Orient pour le génie industriel.'[3]

The chief industry was, of course, the textile handicrafts. Among these the cotton industry was easily the first. The handicraft was spread all over India.[4] The muslin of Dacca

[1] J. F. Royle, *Arts and Manufactures of India.* Lectures on the result of the Great Exhibition of 1851. First Series.

[2] J. F. Watson, *The Textile Manufactures and the Costumes of the People of India*, p. 5 (1867).

[3] Royle, op. cit., p. 534.

[4] For a general description and distribution of the handicrafts see Royle, op. cit., Sir G. Birdwood, *Industrial Arts of India* (1880), and T. N. Mukherjee, *Art Manufactures of India.*

was the finest and best known of all these. It was of this that a Manchester manufacturer, when he could not rival its fineness, said deprecatingly that it was but a 'shadow of a commodity'. In 1880, muslin was still produced in Dacca, but the quality had greatly deteriorated and the industry itself was rapidly dying out. It was an industry which depended entirely on the existence of a court, rich and luxurious. A piece of the finest muslin (Mr Mukherjee mentions), 20 yards long and one yard wide, could be made to pass through a finger ring and required six months to manufacture.[5] With a court, fairly regular orders could perhaps be forthcoming, but without one, the industry was doomed. Besides at Dacca, muslins were made at Krishnagar, Chunderee and a few other places.

Next to muslins in importance were the fine cotton fabrics of all kinds manufactured practically all over India. Lucknow in the North-West Provinces was famous for its chintzes, Ahmedabad for its *dhotis* and *dopattas*. In the Central Provinces, Nagpur, Umrer and Paoni were well-known for their silk-bordered cloths. In the Madras Presidency the speciality was the *palampore* industry.[6] The fabrics of Madura and many other places were also famous.

The cotton manufactures were, of course, the most widespread; next to them came the manufacture of silk cloths. Of these the most famous were the *choppahs, bandanas,* and *corahs* of Murshidabad, Malda and other Bengal towns which were greatly in demand for export;[7] the fine flowered brocade work done at places like Benares and Ahmedabad, and the fabrics in double weaving of colours produced at Poona, Yeola and other places.

In woollens the best known of the artistic products were the Kashmir shawls, chiefly produced in Kashmir and in Amritsar, in Ludhiana and in several other Punjab towns. By 1880 the industry was rapidly declining and indeed this decline was so rapid that by 1895 the industry was already a mere tradition—a memory of the past.[8] The history of this

[5] T. N. Mukherjee, *A Handbook of Indian Products* (1883).

[6] See article on 'The Decline of the South India Arts' by Pandit Natesa Sastri, *Journal of Indian Art* (1889-90).

[7] J. Geoghagen, *Report on Silk in India* (1874).

[8] Sir W. R. Lawrence, *Valley of Kashmir*, p. 375 *et seq.*

industry is very interesting as showing within a short time the various phases through which the other handicrafts passed when they came into contact with a new set of conditions. The industry was originally confined to Kashmir but the fame of the Kashmir shawls was spread all over India and the shawls were in demand in the courts everywhere. In about 1830 a great famine occurred in Kashmir, which drove a great number of the shawl weavers to the Punjab. They settled in the Punjab towns and plied their craft there. By now Amritsar had become the chief emporium of the shawl trade. But at this time, i.e. about the middle of the century, a great change was coming over the industry. The shawls were becoming popular in Europe—especially in France—and the French traders were slowly getting control over the industry. In the sixties they had got almost complete control over it. They used to advance money to the weavers, and buy the finished goods from them. It must be said to their credit that they fought and resisted the evil of adulteration and prevented the introduction into the industry of aniline dyes—an event which has been considered by all experts on the subject to have been one of the main causes of the decay of Indian textile handicrafts.[9] But the Franco-German War was a great blow to the industry, a blow from which it never recovered. The war cut off the French demand effectually, and even after the close of the war, the change of fashion in France and other causes prevented the revival of the demand. In the sixties the shawl industry was perhaps the most flourishing art manufacture of the Punjab. But in the next decade it rapidly deteriorated; the evils of adulteration and the harmful aniline dyes rapidly crept in; the temptation to put cheaper and inferior goods on the market spoilt the reputation of the industry and the position of the weavers went from bad to worse. The shawl industry became a sweated industry. Simultaneously Paisley was beginning to bring out cheap imitations of the shawls. This was the final and the fatal blow. Under it the industry succumbed and,

[9] But in Sir G. Birdwood's opinion the introduction by the French traders of European patterns of all kinds which happened then to be fashionable marked the beginning of the rapid deterioration in artistic merit of the industry. See Birdwood, op. cit.

as remarked above, had already in the nineties become a mere tradition.[1]

Leaving aside the textiles and woven stuffs, there was the working in metals. Benares was famous all over India for its brass, copper and bell-metal wares. Other important centres of this craft were, in Bombay Presidency, Nasik and Poona; and in the south, Hyderabad, Vizagapatam and Tanjore. These were only some of the more important centres of an industry which was spread all over the country. Many other metal crafts such as enamelling, damascening and *bidri* work had also reached a high standard. The damascened work was particularly used in ornamenting arms, shields, etc. It was chiefly practised in Cutch, Sindh and Punjab towns like Sialkot, Kotli, Lahore, etc.

The towns of Rajputana also excelled in all kinds of artistic work especially enamelled jewellery, stone-carving, etc. The number of such handicrafts found throughout the cities of India was very large; and most forms of artistic handicrafts were practised at one place or another. In the handicrafts themselves, there was a good deal of division of labour. This division of labour was naturally not so minute and complete as in these days of improved mechanical appliances; but as far as the various appliances then used allowed it, division of labour was undoubtedly carried out in these artistic industries. For the attainment of any high degree of skill and excellence in any branch such a division was obviously essential. Thus, in the making of gold or silver thread, the materials had to pass through many different sets of workers. Side by side with this division of labour there was also some degree of localization of industry. But this localization was very imperfect.

Thus every important city had its full complement of the different handicrafts. Undoubtedly, on account of the forces of nature controlling the supply of raw materials or other causes, some handicrafts were localized in different parts of the country, for instance the shawl industry or the papier-mâché work in Kashmir.[2] It is also true that on account of

[1] Lawrence, op. cit., and D. C. Johnstone, Monograph, *Woollen Manufactures of the Punjab* (1886).

[2] Another good example is the sandalwood carving of Mysore and South Kanara.

the force of a long tradition and other similar reasons certain crafts became almost the monopolies of particular cities, e.g. the marble inlaying work at Agra.[3] Again, particular localities had become famous for their special products; instances of this might be cited in the *paithani* of Yeola which was famous throughout the Maratha country, the *kincob* of Ahmedabad which was known throughout India, or the *phulkari* work of certain cities of north India. But these exceptions do not vitiate the point made. These specialized goods were generally only those requiring the highest skill in their manufacture and the demand for them outside the place of their production was very limited. The chief feature to be noticed is that the demand for the products of the handicrafts was confined, mostly, to the place where they were produced. The outside demand, except in a few rare cases, was insignificant. The restriction on the area of demand was the most serious limitation of the Indian handicraft industry. For it adversely affected its size and also the development of its internal organization.

Still, as compared with the other existing forms of industry in India, the urban industry was certainly the best organized. The great majority of the industrial population of India lived in villages, but they were ordinary artisans, most of them village servants, who plied their traditional occupations uninfluenced by the outside world. Here there was no specialization; the economic organization was of a most primitive type. But in the bigger cities each craft was organized into guilds, which looked after the welfare and also the quality of the work of their members. Sometimes, as in Ahmedabad, the highest personage of the city was made the titular head of the guilds and called the 'Nagar-Seth' or the City-Lord. Sir George Birdwood gives the general constitution of these guilds as follows: 'Each separate guild is managed by a separate court of aldermen or mahajans, literally "great gentlemen". Nominally it is composed of all the freemen of the caste, but a special position is allowed to "seths" or lords, chiefs of the guild who, ordinarily two in number, hold their position by hereditary right. The only

[3] The proximity of the marble quarries of Rajputana was certainly greatly responsible for the localization of this industry in Agra.

other office-bearer is the salaried clerk or "gumasta".'[4] In general with handicrafts everywhere each independent craftsman was not a big capitalist. He generally worked to order and worked on the materials supplied by his customer. But as far as the circumstances permitted the urban industries in India were well-organized, and provided that the demand for their products was forthcoming, they were in a flourishing condition. In short, at the beginning of the nineteenth century they occupied a very favourable and important position in India's economic activity. In spite of this, we are confronted with the problem of a rapid decline both in the artistic excellence and economic importance of these handicrafts, a decline which, though in some cases it began as early as the end of the eighteenth century, became very marked about the middle of the nineteenth century.

The causes working towards this result were very numerous. But the most important of them were: (1) The disappearance of the native Indian courts; (2) the establishment of an alien rule, with the influx of the many foreign influences that such a change in the nature of government meant; (3) the competition of a more highly developed form of industry.

Of these, the first meant the cessation of the main source or rather the entire source of demand for the products of these handicrafts. We have quoted Mr Hoey above to show what effect this had on the handicrafts of Lucknow. The abolition of the court of the Nawab meant that the fine articles which were in demand by the nobles for state occasions and for display in durbars and other ceremonial occasions, were no longer required.[5] Wherever the court was abolished, handicrafts and arts began to decline. The process was naturally not rapid in the beginning. 'Though the court disappeared, the class of nobles remained; the reputation of the place could not be destroyed suddenly, and the manner of living of a whole class could not be changed at once. Thus the

[4] Birdwood, op. cit., vol. I, p. 139.

[5] The Nawabs of Oudh indirectly fostered a flourishing dyeing industry at Lucknow by a prescription that the nobles should appear in different coloured cloths on the different festivals, etc., during the year. The decline in the Lucknow dyeing industry after 1856 was very rapid. S. M. Hadi, Monograph, *Dyes and Dyeing: N.-W. Provinces* (1896).

demand for the luxury goods survived the disappearance of courts in most places; but this was a steadily diminishing demand. The younger generation was brought up unaware of the splendours of the old durbars except by hearsay; and they had not the same inducement and means as of old to patronize the arts and the handicrafts. The same point is well brought out by another fact. For though British rule slowly extended all over India, many places did not come directly under it. The native feudatory princes, though shorn of much of their glory and wealth, still remained in many places. It is a suggestive fact that handicrafts were still quite flourishing in many of the capital towns of these states, while they were dying out rapidly in the British territory. The examples of this were to be found in Kashmir, in some of the states of Rajputana and Kathiawar and in the Nizam's Dominions. But there is another consideration; not only did they create a demand for these artistic goods, but the princes also retained some of the best craftsmen, giving them a regular salary.[6] Thus the craftsmen, assured of their livelihood, could produce their wares and develop their ideas at leisure. All experts are agreed that craftsmen produce their best when they are not in a hurry to put their wares on the market. The point need not be laboured further but it is clear that the disappearance of courts struck the first blow at Indian handicrafts by steadily curtailing the demand for their products. The immediate effect of this was the stoppage of the production of the highest class of goods such as would be required only by princes and the highest nobles on a big state occasion. The ordinary demand did continue for some time even after this disappearance of the courts, but it invariably had a tendency to diminish steadily.

Still the deterioration of the handicrafts cannot be completely explained merely by the fact of the disappearance of the courts. For even where the courts remained, the decay, though slower, was as inevitable as in the British territory. The second reason partly accounts for this; for with the establishment of an alien rule, foreign influences, unfavour-

[6] Sometimes the state conducted large manufactories on its own account. See Prof. J. Sarkar's article, 'State Industries in the Mughal Empire', *Modern Review* (November 1922).

able to the existence of these handicrafts, made their way into the feudatory States also.

It has been pointed out above how the demand for the industry, maintained by the existence of the court, had been cut off. It is natural to inquire what was the new source of demand. The demand for the wares which the handicrafts-men produced could only come from the richer urban classes, and, therefore, one naturally turns to the classes which under British rule occupied the position economically held in the old times by the nobles of the court. No doubt, many of the descendants of the old noble families were still very rich, but being mostly landed proprietors and having now no attraction to remain in the towns, they had naturally retired to their estates. Their position was now occupied in the towns by two classes: (1) the European officials and (2) the new educated professional class.

With the demand for Indian wares created by the official class may also be classed the demand of European tourists. The effect of this demand on the Indian handicrafts was twofold. Firstly, it certainly arrested the decay of these handicrafts. The demand created by them was very small as compared with the demand created by the presence of an Indian court, but it was certainly a help to stay the rapidity of the fall. But the other effect, which the European demand had, is of a doubtful value. This demand undoubtedly tended to lower the artistic value of goods produced. A very striking example of this was seen in the Kashmir shawl industry, when the French agents began to introduce Euro-pean patterns in the industry. But it was the same story everywhere. The Europeans introduced new forms and patterns, which the craftsman did not understand. They laboured to please their customers and assiduously copied these forms. The products occasionally were bad copies of the original,[7] but even when they were good copies, they lacked the life and vigour of the indigenous articles. In any case, the effect was disastrous to indigenous art. Mr Maclagan remarks very briefly on the state of the *koftgari* industry at Kotli thus: 'The workmanship here is declining and the

[7] 'European forms are also being copied and badly copied.' See C. J. Halifax, Monograph, *Pottery and Glass: Punjab* (1892).

prices rising; the result of indiscreet European patronage.'[8] And everywhere we see the same sentiment expressed. Indiscriminate European patronage was lowering the standard all round. But it was not only the introduction of new patterns and want of discernment in the case of the old. The demand of European tourists, which was one of the mainstays of these handicrafts, was again a demand for cheap goods. They demanded ornamental knick-knacks, souvenirs, etc., as cheap as possible, and they got them. But with the result that they also got extensive adulteration in the raw materials used and extremely hasty workmanship.

The next class which was the natural successor to the position of the nobles was the newly created educated class. This was mostly an urban and professional class, somewhat corresponding to the professional section of the 'bourgeoisie' of the west.[9] This new class might have been expected to patronize the handicrafts. But it may be said that the demand from this class did not amount to even as much as the demand from the Europeans. Indeed, with a few exceptions they entirely turned their backs on the indigenous arts. One of the most harmful effects of a foreign rule is the imposition on the conquered peoples of the ideals of the conquerors; and the newly created Indian 'bourgeoisie' showed itself during the latter half of the last century extremely ready to accept European standards and to pour scorn on everything Indian. This was specially so in the case of the arts. To follow European fashions was considered the hall-mark of enlightenment. Consequently the products of indigenous industries suffered. In the monograph on the Punjab silk industry we read: 'To wear silk is not the fashion it used to be in Sikh times or to the extent it still is in the Native States. European cotton goods, printed calicoes and cheap broadcloths have turned silken garments out of the field.'[1] Also from the North-West Provinces: 'The trade in the finer products of the potter's arts when of pure oriental design meets with no encouragement.'[2] Very often in the

[8] E. D. Maclagan, Monograph, *Gold and Silver Work: Punjab* (1890).

[9] For an interesting account of the rise of 'bourgeoisie' in India see M. N. Roy, *India in Transition*, chap. i (1922).

[1] H. C. Cookson, Monograph, *Silk Industry* (1892).

[2] Dobbs, Monograph, *Pottery and Glass: North-West Provinces* (1895).

official monographs on these industries one comes across the remark: 'The demand is purely European.'

It was perhaps natural for this class to act as it did: it was itself entirely a product of British rule. But in a number of cases their tastes were almost forcibly fixed for them by some stupid rule or convention of European officials or by the fear of incurring their displeasure. Thus Mr Kipling explains the decay of the embroidered shoe industry: 'No sumptuary regulations to restrain extravagance in gilded shoes, and enforce the use of plain black leather could be half so potent as the unwritten ordinance, which permits an oriental to retain a pair of patent leather boots on stockinged feet and requires him to doff shoes of native make, when in the presence of a superior.'[3] But these were not the only adverse influences. In one peculiar case British rule effectively killed a handicraft. This was the damascening and inlaying of arms, weapons and shields, which, according to Dr Royle,[4] was as late as 1850 common all along the north-west portions of India—in Cutch, in Sindh, in the Punjab. By removing the necessity for, and by an active prohibition of, the use and possession of arms, the British succeeded in reducing this industry to the state of being confined to produce ornamental knick-knacks for European tourists and others.[5]

The establishment of British rule also affected handicrafts in another way, for it indirectly weakened the power of the guilds and other bodies which regulated trade and saw to the quality of the materials used. As soon as the supervising bodies were removed, many evils began to creep in immediately. These were, for example, the adulteration of materials, shoddy and slovenly workmanship, etc. These at once led to a decline in the value, artistic and commercial, of the wares.[6]

[3] Kipling, 'The Industries of the Punjab', *Journal of Indian Art*, No. 11 (1888).

[4] Royle, op. cit.

[5] See above, Mukherjee, *A Handbook*, etc.

[6] Many of these trade organizations which supervised the quality of the work etc., remained in existence till comparatively recent times. Especially was this the case in such industries as wire and tinsel where it was necessary to guarantee the purity of the raw material used for keeping up the reputation of a place. See E. Burdon, Monograph, *Wire and Tinsel: Punjab*

While, undoubtedly, the disappearance of the courts and the establishment of an alien rule contributed mainly to the decay of Indian handicrafts, the competition of European manufactures was also partly responsible for the process. This was especially the case in the matter of textiles; and the finer branches of this craft were very readily hit. For the ordinary peasant wanted a cloth, which, though coarse, should be at once cheap and durable. This the European manufacturer was unable to produce at the price required; thus the village weaver was more or less untouched by European competition; and the urban weaver, who worked in a somewhat finer class of goods, had to bear the whole brunt of the competition. In the matter of quality, the Indian weaver could easily hold his own; but, in the matter of price, he was hopelessly beaten by the machine-made goods. There is no doubt also that the great regard for everything foreign by the Indian middle classes helped foreign goods a great deal in their competition with Indian textiles. The point must be emphasized here that foreign competition was not very important in this question. The mere general preference for cotton in place of silk, for example, cannot be said to have been the result of the competition of foreign cotton goods with the indigenous silk industry, but rather shows a change of taste and fashion.[7] The competition of European cheap luxury goods with the products of Indian urban industry did not begin till very late, and by that time the indigenous industry was already rapidly decaying. In some cases, such as dyeing, the decay of the industry was directly due to foreign competition, but this is an exceptional case. The chief reason, then, for this decline was the cessation of the chief source of demand, and the change in taste of the people.[8] But the rate of decline was greatly fur-

(1909). In many places, e.g. Lucknow and Delhi, the industry began rapidly to decay as soon as the supervisory bodies vanished. See Hoey, op. cit.; for similar experience in Kashmir industries, see Lawrence, op. cit., pp. 373-4.

[7] In Burma, where popular tastes in this matter have not changed the position of silk is unaltered; though lately the indigenous silk industry is suffering from the severe competition of Chinese and Japanese cheap silk products.

[8] The change of taste also came about, though later, in the Native States with the same effect. Mr Collin in 1890 states: 'Bengal is very deficient in

thered by the conjunction of other causes. How rapid this was will be gathered from the fact that, for example, some crafts noticed by Sir George Birdwood in 1878 in Lahore were no longer existing there in 1888.[9] The decay was both in artistic and commercial value. The very great difference between the artistic merits of the old and the new was very well seen in the Delhi Exhibition of 1902.[1] It is very instructive to observe that the very highly praised Bhavnagar house at the Delhi Exhibition of 1902 had been specially prepared, by the order of the Maharajah, by artists working strictly according to ancient rules.[2] But for such work leisure and certainty of demand were two things required above all, and such conditions did not obtain any longer. Efforts to revive the arts and crafts have been numerous of late years. They have been slightly helped by the schools of art, etc., and the movement has also been carried on by men like Messrs Havell and Kumarswami. These have borne a certain amount of fruit. The new school of painting in Bengal, which draws its inspiration from the old Indian painting tradition, is an example. But these efforts are in the direction of art, properly called, and not industrial art or artistic handicrafts. In some of these, new patterns have been introduced and new methods tried, but the tastes of the people are not yet refined enough; and nowadays the competition of cheap foreign luxury goods damps the ardour of the revivalists. The process of decay, begun by the establishment of foreign rule and helped on by the force of foreign influence, was completed by the competition of foreign goods. And towards the end of the last century, the urban industry of India had only two courses left to follow, either to change its methods and turn out cheap art wares—products generally of a terribly sweated industry—of doubtful artistic value, but paying commercially like the art industries of

arts. They formerly flourished in the shadow of the courts of Native Princes and have disappeared with them. Modern Rajas appear more inclined to patronize foreign productions than the arts of the country, and the native artists have not adapted themselves to the times.' E. W. Collin, *Report on the Existing Arts and Industries of Bengal*, p. 12 (1890).

[9] See Kipling, 'Industries of the Punjab', op. cit.

[1] Sir G. Watt, *Art at Delhi* (1902).

[2] ibid., p. 18.

Japan, or keep to their old standards and face decay—slow or rapid.

This was the history of old Indian urban industry, then the most important form of organized industry in India. For a time, now, there was a relapse, a retrograde step, and India in the eighties afforded the spectacle of a huge country with decaying handicrafts, with any other form of organized industry almost non-existent and a consequent falling back upon land. The decay of urban industry certainly heightened the pressure on land, not so much by an active migration from the cities (not that this was entirely absent), but by the retaining of people on land who would, otherwise, have been in due course absorbed into the urban industries. For this population it was necessary to find an outlet, and thus we come to the question of the new forms of industry which were being introduced into India at this time.

Note.—It will be observed that throughout the above chapter the word handicraft has been used in a peculiarly restricted sense. It has been used to mean only the luxury and semi-luxury industries, which were the peculiar urban industries of India. It will be seen also that a twofold division has thus been made in the old Indian industry. On one side are the village industries, which included the village servant class of artisans and also such classes as the country weaver, goldsmith, etc. The characteristic of this class was that they were spread throughout India. This class of industry was also confined, more or less, to the primary needs of man and the organization of industry was of the crudest. The second class is that of urban industry, better organized and confined to the higher class of products. The division is obviously of a rough nature. In the village a luxury industry was a very rare phenomenon; but in the town there were always some industries, which were akin in the nature of their products to the village industry group; for example, a certain amount of coarse weaving, ordinary pottery work, etc., was always to be found in the towns. (But even in this the urban worker was generally better organized.) Again the twofold division, as regards the same

craftsman even, is somewhat fallacious, for a brass and copper smith, who produced artistic wares, might also habitually produce common utensils. In spite of these somewhat obvious defects, the twofold division is in the main true. For though there was a common artisan industry in the towns, the handicrafts were by far the most important and significant section of urban economic activity in India.

There were, however, certain other industries in India, which cannot be included in any of the above classes. This group of industries, as a whole, was not very important, but it contained certain important industries. The group included the iron-smelters of Mysore, Chota Nagpur, Central Provinces and other places, the saltpetre worker, the bangle-maker, and the general worker in glass, also the paper-maker, etc. These cannot obviously come under any of the above groups. They were mostly localized industries, carried on only in some parts of India. A good many required special knowledge on the part of the workers. In many, organized working was necessary on account of the peculiarities of process and other reasons. The specialization of these industries, in peculiar localities, was almost entirely due to the nature of the supply of the raw material. This accounts for the location of the iron, the saltpetre and the glass industries. Some, such as iron-smelting, were industrially very important, and their products used to find their way all over the country. The methods employed were generally crude and uneconomical, but the products, as in the case of Mysore steel, were sometimes of a very high quality. But all these miscellaneous industries were already dying out. An unwise tariff and the discovery of Chili nitrates gave a serious shock to the saltpetre industry; the iron-smelting industry was suffering from the great rise in the price of charcoal—due to the reservation of forests and the extension of railways—and the competition of imported pig-iron. The glass and paper industries were also succumbing under the pressure of imported goods. Thus the opening up of the country was resulting in the killing of all indigenous industries.

CHAPTER IV

The Beginnings of Modern Industry

I. *The Plantations*

We now arrive at a consideration of the new forms of industry which were being introduced into India at this time. It should be observed that there were two forms of such industrial activity now being introduced. The first was the plantation—a form of industry to be found extensively in most of the tropical possessions of European countries, and the other the factory industry—the peculiar product of the latest economic transition in Europe.

The plantation was the first to be introduced into India; from the beginning the industry was purely European. It was the beginning of European exploitation of Indian resources. It is perhaps surprising that till the middle of the nineteenth century there was very little part taken by Europeans in industrial activity in India. But the many restrictions placed on Europeans permanently acquiring land in India (placed by the East India Company to safeguard its interests), the trading monopoly of the Company which lasted till 1833, the lack of internal communications, and also the deplorable lack in India of fertile but sparsely populated tracts, hindered the early growth of such activity. But as some of these obstacles were slowly removed, we find an enormous growth of European industry in India, especially during the years 1860-70, as evidenced by growth of the tea, coffee and jute industries.

The indigo industry is an exception to the above statement, for the manufacture of indigo by European planters began in India before the end of the eighteenth century. Indigo had been grown in India from ancient times, having been chiefly produced, in Dr Watt's opinion, in Gujerat and Western India.[1] The trade in the indigo dye was carried on

[1] G. Watt, *Pamphlet on Indigo* (1890).

extensively by the East India Company, but towards the end of the eighteenth century, on account of the competition from America and also on account of adulteration of the dye, the trade fell off a good deal; and the western Indian industry almost died out. The East India Company resolved to revive the industry and for this purpose they brought planters from the West Indies and settled them in selected districts of Bengal.[2] The Company's officers were also allowed to trade in indigo. This was towards the beginning of the nineteenth century and the establishment of the industry in Bengal gave the death-blow to the Gujerat industry. The next fifty years saw a rapid growth of the industry and by 1850 indigo was one of the most important exports from India. But though the trade and the profits of the foreign planter had been growing at such a rate, it is very doubtful how far the condition of the peasant had improved. As a matter of fact, his condition was worse in the indigo tracts than in other parts of the country. Lord Macaulay wrote about 1840: 'That great evils exist, that great injustice is consequently committed, that many ryots have been brought, partly by the operation of the law, partly by acts committed in defiance of the law, into a state not far removed from that of partial slavery—is, I fear, too certain.'[3] The planters were, as a matter of fact, a body caring little for the law,[4] and being members of the ruling race had little concern for the interest of the peasant.

The system on which indigo was cultivated was not strictly a plantation system. It was only rarely that the manufacturers of indigo cultivated their own lands by means of hired labour. The usual system was to enter into contracts with tenants of other zemindars or of lands over which the planters themselves had acquired zemindari or talukdari rights, to sow a certain portion of their land with indigo,

[2] ibid.

[3] Quoted in the *Pamphlet on Indigo*, p. 14.

[4] There was almost no order kept; and many of the planters kept a band of desperadoes under them to fight neighbouring planters and zemindars. For an amusing account of 'How one took possession of a factory [indigo] in Bengal in 1830', see M. Wilson, *History of Behar* (1908). This book is full of such incidents of violent fights, and exhibits well the entire disregard of the planter for law.

which was sold to the planter at a certain fixed price.[5] Though the abuses of the system had been long recognized, nothing had been done to ameliorate the condition of the peasant. Advances were generally made at the beginning of the agricultural season to the peasant to grow indigo, and many a time they were forced upon him. The ryot when he once took the advances was ruined. The Indigo Commissioners say in their *Report*: 'It matters little whether the ryot took his original advances with reluctance or cheerfulness, the result in either case is the same; he is never afterwards a free man.'[6] In view of the large areas under indigo in Bengal and Bihar the following extract from the Commissioner's *Report* is enough to condemn entirely the system under which indigo cultivation was carried on. They say: 'Even the most advantageous statement made on favourable suppositions shows but a slight profit derivable to the ryot from indigo, and it is quite clear from statements as to the production of rice, not to speak of the higher kinds of produce, that indigo as a paying crop must stand very low in the scale.'[7] Only one inference can be drawn from this, even apart from the direct evidence of coercion produced before the Commission, and that is that indigo cultivation was carried on on a system which had no connexion with the welfare of the peasant. Such was the system of indigo cultivation and such it remained. The progress achieved in the spread of indigo cultivation in 1860 was not exceeded during the next twenty years. By then, the indigo industry had grown to almost the maximum of its capacity and henceforth it remained almost stationary.

[5] The very small amount of *nij cultivation*, i.e. cultivation under the system of planters growing their own indigo, showed that the planters preferred the peasant to grow indigo for them and to buy it at a fixed price from him. *Minute of the Lieutenant-Governor of Bengal on the Report of Indigo Commissioners* (1861).

[6] *Bengal Indigo Commission Report*, p. 25.

[7] ibid., p. 18. But the general conclusions of the Commissioners and also of the Lieutenant-Governor were that the cultivator did not make even a small profit. The planters generally insisted on one-sixteenth of the land of the ryots being under indigo. The loss on this is compared to the following case: 'This is as though a farmer in Great Britain farming under a long lease 160 acres of land at a rent of two pounds an acre, were, by some sort of pressure, forced to cultivate ten acres, say in flax, which he was compelled

The tea industry in India began much later than indigo. The indigenous tea plant growing in a wild condition in Assam was first discovered about 1820. The attention of the East India Company was directed towards it and after some inquiries an experimental garden was started by the Company in 1835. After working it for five years the East India Company made it over to the Assam Company—the first Indian tea company. The progress during the next twelve years was almost nil. In 1852 a private garden was started and then the number of gardens began to increase. 'It may be said, however, that the foundations of the present tea industry were laid between 1856 and 1859.'[8] From the latter date the rate of growth was indeed amazing, both in the number of estates and the outturn of tea. The following figures give the details for Assam which, at this time, was by far the most important area of tea production in India.[9]

Year	No. of estates under distinct proprietors	Area under cultivation (acres)	Outturn of tea in lb.
1850	1	1,876	216,000
1853	10	2,425	366,700
1859	48	7,599	1,205,689
1869	260	25,174	4,714,769
1871	295	31,303	6,251,143

The figures for 1869 do not show clearly the feverish growth which took place in the industry during the period 1859-66. To understand this phase of the industry, it is necessary to see how the industry was conducted at this time. The grants for tea lands in Assam were mostly made in the fifties, under the Assam clearance rule of 1845. These, though they did not protect the rights of the wild tribes inhabiting these tracts, provided against grants being reck-

to sell to a neighbouring manufacturer at a dead loss of £140 a year.' *Minute of the Lieutenant-Governor*, p. 12.

[8] Edgar, 'Note on the Tea Industry in Bengal', *Papers Regarding the Tea Industry in Bengal*, p. 7 (1873).

[9] 'Memorandum by Mr Campbell on Tea in Assam', ibid., p. 128.

lessly made to speculators, the guarantees being the deposit for making a proper survey and an obligation to bring a certain proportion of land under cultivation in a certain number of years, etc. The local officers at first exercised a good deal of discretion in favour of the rights of the native tribes, and they were careful to see that the applicant had sufficient means to cultivate the land before allowing his application. But in 1859 the speculators, naturally averse to these restraints, brought pressure to bear on the Government. The Government was very anxious to promote the industry and 'the practice of requiring applicants to show that they had means to cultivate the land was forbidden'.[1] A rush of applications followed and an orgy of speculation ensued. The estimates formed by everybody of the future of the tea industry were extremely rosy and, with the relaxation in the rules under which grants of land were made, the way of the speculator became extremely easy. As regards the survey of these grants Mr Edgar says: 'In most cases the compass ameen [i.e. the Government Surveyor] sent in a fancy sketch of an almost imaginary tract of land, which was generally found, when the professional surveyor went over the ground some years later, to bear very slight resemblance to the real grant. Sometimes the grant had no real existence whatever, sometimes it was far away, in wilds inhabited by wild tribes who owed merely a nominal allegiance to the Government and who would probably have taken the head of the grantee if he had attempted to take possession.'[2] But the grantee generally had no idea of taking possession; what he did was to sell the grant to companies financed in London for the purpose of working tea gardens; and even if the grantee took possession he had no idea of taking the cultivation of tea seriously. The general attitude of the actual planters is reflected by a saying, current amongst them at that time, 'that it was doubtful whether it would ever pay to make tea, but there was no doubt that it paid to make the gardens'.[3] The gardens were not only planted carelessly but 'often was a small garden made of 30 or 40 acres sold to a Company as

[1] Edgar, ibid., p. 11.
[2] ibid., p. 11.
[3] ibid., p. 8.

150 or 200 acres'.[4] A most remarkable instance of such practices, given by Mr Campbell, occurred in the Nowgong district, 'where the Indian manager of a promoter of companies in London was advised by his employer to clear and plant a certain area of waste land for delivery to a company to whom he had just sold it as a tea garden'.[5]

Such enormous speculation and the hasty way of clearing wild waste and the planting of tea, brought up the question of labour in a very acute form. Up to about 1860 the local labour supply though scanty had been sufficient for the needs of the tea gardens. During the speculation craze the demand for more labour become insistent and coolies had to be imported from Bengal to meet the demand. These coolies were generally imported at this time through the agency of contractors of labour in Calcutta. The price of labour had risen very high and it paid the contractors to get together all kinds and conditions of coolies they could, and send them on to Assam. The method of transportation was extremely imperfect and a large proportion of these coolies died on the journey; and when they did reach the gardens, their miseries were 'in too many instances cruelly aggravated by the ill-treatment of their employers'.[6] The coolies were in most cases deceived as to their future prospects and when they reached Assam their position was that of virtual serfs, for the time of their contract. If they ran away they could be arrested[7] and brought back and they could even be imprisoned for refusing to work. To this legal coercion were added many illegal practices of the planters, such as flogging.[8] The position of the cooly was worst during these years of speculation and it tended to improve slightly in later years.

[4] ibid., p. 9.

[5] Campbell, ibid., p. 125.

[6] Edgar, ibid., p. 21.

[7] Powers were given to planters by the Act of 1865 to arrest runaway coolies from their estates.

[8] The usual methods of recruiting labour, afterwards, were through contractors; or through a selected employee (called a garden 'sardar'), sent by individual employers to his home to get labour directly for the garden. The evils of this system are brought out well in the *Report of the Committee on Labour Supply in Tea and Coal Industry* (1896).

The enormous speculation in gardens brought about a sudden reaction in 1866; all tea property depreciated and all the 'bubble' concerns failed. There was a great deal of distress among young men who had come out to manage tea gardens. The depression in the trade was very severe and lasted till 1869, when matters began to improve, and by 1871 the tea industry was placed on a firm basis. After this the progress of the industry was steady for more than two decades. The cultivation spread to other parts of the country such as the Punjab (Kangra) and the Nilgiris, and the industry, now on a sound basis, prospered greatly.

Coffee was first introduced into India by the Moor traders in the seventeenth century, and its cultivation was undertaken in many parts of south India.[9] It did not attain importance, however, till its production was undertaken by European planters. The first coffee garden was planted by a European in 1840; the industry thus started did not, however, flourish till 1860, when causes, such as the declension in coffee cultivation in other countries, helped to increase the extent of the industry rapidly. The compiler of the *Mysore Gazetteer,* in reviewing the growth of the industry in the Kadur district, remarks: 'Since 1860 estates have sprung up between these points with such rapidity that European planters are settled in almost a continuous chain of estates from the south-west of Shimoga to the southernmost limits of Manjarabad, not to mention Coorg and Wynaad beyond.'[1] During the first decade after 1860 alone the exports of coffee increased nearly tenfold and the same rate of increase continued till 1879. From 1860 to 1879 was a period of continuous and uninterrupted progress and prosperity for the coffee industry. But already in 1875 the borer disease was creating havoc among the plantations and it increased in its intensity in 1879. This was the beginning of the severe check which the industry suffered in the next decade.

Labour for working these plantations was imported from the neighbouring districts. A good deal of this labour was temporary and consisted of agriculturists who came in when

[9] See Watt, *Dictionary of Economic Products*, article on Coffee.
[1] L. Rice, *Mysore Gazetteer*, vol. II, Kadur District, p. 375 (1897).

the agricultural operations for the season were over. Here also there was an Act giving the planters control over their labour, but it was not very stringent. The labour force in this industry was not far removed from its home, nor were the districts in which the industry was conducted unhealthy and, therefore, the condition of labour was much better than that obtaining in the tea industry.

With the introduction of the investment of European capital in India, a new factor in its economic development was introduced. Hitherto the Europeans had been content with their share in the commerce of India. They were the carriers of India's foreign trade, but had as yet taken little direct share in the growth of Indian industry. Now, with the growth of plantations and the jute industry, a new source for the finance and business management of Indian industries became available. This factor, which began to be prominent after the middle of the nineteenth century, was destined to play a very important part in the industrial progress of India.

II. *The Factory*

The factory industry, which is the form of industry which took the place of handicrafts during the nineteenth century almost everywhere, also finds its beginnings in India during this period. Attempts had been made for a considerable time to introduce the factory system in many industries, notably by Europeans. Some of them had at least a temporary success. For example reeling machinery had been introduced in silk filatures by the East India Company and the industry had been for some time quite prosperous.[2] But most of the other pioneering attempts had met with decided failure. Thus before the fifties there was—if we exclude the indigo factories—an almost entire lack of factory industry in India. It was during the fifties that the two industries which have always been the foremost among modern Indian industries were started.

The cotton industry, as being the more important, may be considered first. The company which built the first cot-

[2] The Serampore paper mills which were also built in the twenties continued to prosper for many decades.

ton mill in India was the Bombay Spinning and Weaving Company which was formed about 1851; but the mill does not appear to have been in working order till 1854.[3] The progress of the industry was naturally very slow at first and by 1861 only a dozen mills were in existence. The first mill was built very near Bombay though not on Bombay island itself, and the industry continued to grow round Bombay. The decade 1860-70 was not very favourable to the growth of the mill industry. One of the chief unsatisfactory features was the high price of raw cotton, on account of the American Civil War. This high price of cotton hit both the handloom industry and the young mill industry of India. The other reason was a severe trade depression in Bombay which followed the enormous cotton boom. This cotton boom has already been noticed as marking the advent of a new economic era in India. Its aftermath was also typical of the new conditions that were being introduced. The trade crisis, which followed the reckless floating of companies for all possible and impossible purposes and the resulting collapse of all credit, was the first of its kind in India.[4] It might be noted here that this depression in western India coincided, in point of time, with the Assam tea trade depression. The collapse of credit in Bombay in 1865 was indeed so complete that normal conditions were not restored till 1871. The result was that there were only eighteen cotton mills in the Bombay Presidency and two in Bengal in 1872-3. The crisis, however, had one good result for the cotton mill industry. It demonstrated the impracticability of the numerous schemes that had been launched during the boom period and also showed that the cotton industry was the only stable and profitable industry. Thus as soon as trade confidence was restored there was a very great increase in the number of mills. The increase was specially marked in the year 1874-5. In 1874 the number of mills in the Bombay Presidency was nineteen, in 1875 it had risen to thirty-six, to thirty-nine in 1876 and forty-two in 1878.[5] The increase

[3] See article in Watt, op. cit.

[4] D. E. Wacha, *A Financial Chapter in the History of Bombay* (1910).

[5] The statistics are taken from the evidence before the Bombay and Lancashire Cotton Spinning Inquiry (1888).

in the industry during this decade, especially after the effects on trade of the Franco-German War had passed away, was very considerable and it now definitely took the position of the most important factory industry in India. The extent of the industry in 1879 was:

Mills	Spindles	Looms	Persons employed
56	1,453,000	13,000	43,000

Of these mills nearly three-fourths were situated in the Bombay Presidency and more than half the total on Bombay island itself. The number of looms as compared with those of the spindles was very small and, indeed many of the mills were only spinning mills. This predominance of the production of yarn continued to be an important feature of the industry for a very long time.

Leaving aside the spinning and weaving industry, quite a considerable number of persons were employed in another cotton industry—the ginning and pressing factories. Till the sixties most of the cotton sent to the ports from the interior of the country was unpressed and a few presses were established in the more important ports like Bombay. But the impetus given to cotton cultivation by the American War and the rapid growth of communications had the effect of introducing the use of steam presses, and later on of steam gins, in the cotton tracts themselves. This introduction was not very rapid, and Mr Rivett-Carnac mentions that till 1867 presses were but little used in the Central Provinces.[6] It was only after 1867 that their number began rapidly to increase in that province. Most of the cotton was, till then, sent to Bombay unpressed. Once introduced, the progress of gins and presses was rapid and by 1880 only a small quantity of cotton was sent unpressed to the ports out of the cotton tracts. This industry, though it employed considerable numbers and gave a very much needed occupation to one class of agricultural labourers in the country, was not one of very great importance in the industrial development of

[6] *Annual Report of the Cotton Commissioner, C.P.*, 1868-9, p. 91.

India. For, firstly, the industry was only a seasonal one and secondly, it did not convert raw produce into a manufactured article, but only helped towards the easy export of the raw produce.

Next in importance to the cotton industry comes the jute industry. The trade in jute had been important since the early days of the East India Company, the purposes for which it was chiefly used being the manufacture of cordage, ropes, etc. Till about 1830 the manufacture of gunny-bags and jute cloth was the monopoly of the Bengal handloom weaver.[7] After this date, an active manufacturing industry having sprung up at Dundee, it was found more profitable to export raw jute than to produce gunnies on the handloom. Thus the years following 1830 saw a rapid decline in the jute handloom industry of Bengal. The importance of jute as a material for cordage, ropes, sacking, etc., was also growing rapidly and more and more land was being placed under jute annually. The rise in the importance of jute was greatly helped by the Crimean War, which for a time cut off the supplies of Russian hemp, a powerful competitor of jute.[8] The manufacture of jute with the help of machinery was not started in India till 1854. In that year a jute mill was established at Serampore by one Mr Ackland. From 1854 to 1863-4 only one more mill was built, but from 1863-4 onwards the growth of the industry was fairly rapid. Jute was a monopoly of India and in this the Bengal industry had a strong advantage. Hitherto Dundee, which had successfully killed the handloom industry, controlled the entire market. But the Bengal industry soon established its position. Of this Mr O'Connor, in 1876, remarks: 'While Dundee had only hand-woven jute stuffs made in India to compete with, that city had practically the monopoly of the world's supply; but the development of the manufacturing industry here, in mills furnished with the best mechanical appliances moved by steam, has had the inevitable result of shutting Dundee out to a great extent from the Asiatic and Australian markets,

[7] Article on jute in Watt, op. cit.

[8] H. C. Kerr, *Report on the Cultivation of and Trade in Jute in Bengal* (1874).

and even from a part of the American market.'[9] In 1882 there were in India twenty jute mills employing nearly 20,000 people. Of these mills eighteen were in Bengal and seventeen in the immediate vicinity of Calcutta. The industry was even more localized round Calcutta than was the cotton industry round Bombay. The first jute mill was started by a European and the industry remained always mainly in the hands of Europeans. With the growth of the export trade in raw jute, the jute pressing industry had also begun to acquire importance in Bengal.

Apart from these factory industries modern methods had begun to be used in the mining of coal also. At this date coal was the only mineral product produced in considerable quantities in India. 'The commencement of the industry appears to date back to 1820 when a mine was opened in the Raniganj district in Bengal. For twenty years after this no new mine was opened and then only three mines were opened down to 1854. In that year the commencement of the East Indian Railway line, which was laid to run through the coal-bearing regions of the Damuda basin, gave an impetus to the mining industry and new pits were opened in large numbers.'[1] The progress was steady and this region, i.e. Raniganj and neighbouring districts, contained in 1879-80 altogether fifty-six mines at work. It was natural that with the building of railways in India coal mining should have received an impetus. Not only because before this there was very little demand for coal for industrial purposes, but also because it was impossible to transport coal from these districts cheaply enough without the help of railways. The railways themselves needed enormous amounts of fuel and when, with the rapid disappearance of the forests which lined the first railway lines, wood became dearer and dearer, the demand for coal became more insistent. This demand was the cause of an active import trade in coal from the United Kingdom to India.

Up to the year 1870 the Raniganj coalfields were the only ones to be exploited. These supplied coal to the East Indian Railway and sometimes coal from these fields was carried

[9] J. E. O'Connor, Memorandum, *Account of the Trade and Navigation of British India*, 1875-6, p. 31.

[1] O'Connor, *Review of the Trade of India*, 1878-9, p. 22.

even to the Punjab, but the railway systems of the west and south of India were entirely without access to these supplies. In 1870 the Mohpani deposits in the Central Provinces were opened up but the quantity produced there was insignificant, and they never became very important. In the same year coal was mined in the Karharbari district of Bengal, which became quite important in a few years' time. In 1874-5 another coalfield, that of Warora in the Central Provinces, was opened up. This helped partly to supply the Great Indian Peninsula Railway with fuel, but even so the Bengal coalfields remained by far the most important, and the needs of western Indian railway systems and industries were not at all adequately provided for. The opening of the Suez Canal temporarily depressed the Indian coal industry. The imports after 1870, i.e. after the date of the opening of the Canal, did not rise greatly, but the Indian production of coal seems to have suffered a temporary setback, for the production of coal, which was in 1869 approximately 467,000 tons, went down considerably in the next three years and did not again approach the old level till 1875-6. From this date onwards it continued steadily to progress.[2] But, though the production of Indian coal was increasing, the import of foreign coal was also increasing steadily. This was chiefly on account of the rapid extension of railways in India and on account of the fact that many of these railway systems were unfavourably situated as regards the Indian coalfields. Seventy per cent of the coal imports into India were taken up by the Bombay Presidency. Thus in spite of the growth of coal-producing activity, India in 1880 was still importing about 600,000 tons of coal annually, while there was almost no export of coal from India. The methods used in the industry varied greatly, for while in the larger concerns machinery was largely introduced even at this early date, in most of the smaller pits very little machinery was used; the number of the latter class of concerns was very much larger than of the former class. The coal industry in 1880 gave employment to about 20,000 people.

These three industries—the cotton and jute manufactures and the mining of coal—were the only important

[2] Sir V. Ball, *Economic Geology of India* (1881).

industries in India in 1880. It will be seen from the number of people engaged in them how small even these industries were. But though these were the only industries which had grown by 1880, spasmodic attempts had been made to establish the factory system in many industries, which met with a varying degree of success. For example, in 1869 a beginning was made in the direction of producing leather manufactures by modern methods, when the Government established a factory for supplying leather goods to the army. Among the many other attempts made might be mentioned the various attempts towards establishing a glass factory in the North-Western Provinces and the earlier attempts to establish an iron industry in the Madras Presidency. An account of these is unnecessary, for the large majority of them bore no fruit.

There was an interesting industry in India at this time which has some claims to be called a modern industry. This was the Madras tanning industry. The industry owed its origin to one Charles De Susa who, about 1845, introduced certain improvements in the methods used in tanning in India.[3] This was in Madras City and slowly these improvements spread to the other important towns of the Madras Presidency. But the improvements never spread beyond this Presidency. They were adopted by a large number of tanners and an export trade in Indian tanned hides and skins grew up. At first the trade was carried on with the United Kingdom only, but after the Franco-German war Germany became very active in the trade and this, combined with the repeal of the 3 per cent duty on these exports in 1875 and the extension of railways, which opened up the country supplies of hides and skins to the Madras tanner, made the industry exceedingly prosperous; and by 1880 Madras was exporting a large number of tanned and half-tanned hides and skins to foreign countries. This Madras tanning industry showed an intermediate stage in the development of Indian industry, for it displays the effect of a slight adaptation of improved methods in industry, combined with cheap raw materials and cheap labour. The independent artisan

[3] A. Chatterton, Monograph, *Tanning and Working in Leather in the Madras Presidency* (1904).

disappears from this branch of the trade and the small capitalist—in the person of the export trader in most cases —steps in. The unit of the industry is increased; it became a small workshop with an average of about five to seven workers. The industry had to be a purely export industry; for the village leather-worker tanned the leather that he wanted himself or got it tanned from the village tanner; and the urban demand for leather goods was not large enough to support an industry of this kind. But it is to be remembered that the improvements adopted in the industry were only slight. They were just sufficient to produce a leather somewhat superior to the ordinary Indian village tanned leather, and to make it fit for export. The industry grew only because it had two distinct advantages, those of cheap labour and cheap raw materials, and the loss of even one of these was enough to arrest its growth. It is impossible to estimate the number of people employed in this industry, but it could not have been very large.

The above account of the few new industries in India will conclusively show that the extent of these in 1880 was exceedingly small; and that, while the process of driving out people from their old crafts was proceeding quickly, the growth of new industries to absorb the people thus displaced was in no sense proportionate.

CHAPTER V

The Agriculturist, 1880-95

THE village in India is *the* unit of agriculture and, therefore, the general constitution of the village is of great importance to us. India has always been a land of small holdings, whether worked by peasant proprietors or cultivating tenants. The rights that the peasant possessed over his land were dependent on the nature of his tenure. The variety of the tenures in India is rather complex, but there are two broad divisions among them. These are the 'ryotwari' and the landlord tenures. The great majority of the villages in India came under one of these two divisions.[1] In the ryotwari tracts there was no single ownership over the whole village. The village consisted of a number of independent peasant proprietors. In the landlord village, on the other hand, it was owned by a single landlord or a group of co-sharing landlords. Where a single landlord owned the village, all the cultivators were his tenants. In the co-sharing landlord village the practice differed; in some, the whole of the cultivation was carried on jointly and there was no definite division in different plots of the different co-sharers; in others, such a definite division of plots existed. Again, sometimes the joint landlords with their families worked the whole village, but sometimes, also, they admitted cultivating tenants in the village. Of these different systems the ryotwari tenure predominated in the south, the single landlord system in Bengal, while the co-sharer villages were mostly to be found in the North-West Provinces and the Punjab.[2]

These different tenures did not make a great deal of difference in the internal constitution of the village. As regards the village artisans in the landlord village, they

[1] The most important group, outside these, was the 'malguzari' tenure of the Central Provinces.

[2] B. H. Baden-Powell, *A Short Account of Land Revenue and its Administration in British India* (1913).

owed special duties to the landlord, but otherwise their position was not greatly different from that of the corresponding class in the ryotwari village. The common bond holding together the ryotwari village was the power of the headman and the presence of common artisans paid by the village, while in the landlord village it was the single or group ownership. It is to be noticed that in the cultivated area of the village there was no communal property; each cultivator had his own holding and was generally free to manage it in his own way.[3]

Of course, in the first half of the nineteenth century, the nature of the cultivation was dictated by the self-sufficient character of the village. The bulk of the produce had to be the food-grains, consumed in the village, and such crops as oil-seeds, cotton, etc., grown for local requirements. There were only two important kinds of agricultural produce which, on account of their nature, could not be grown generally all over India. They had thus to be grown to be sent out of the village. These were cotton and sugarcane. The trade even in these was of a limited extent and the area it covered was also limited. Thus cotton was extensively grown all over India in small patches round the village, and the only regular stream of commerce in this article was the supply, to Bengal, of cotton from Nagpur and Berar via Mirzapur. In Bengal even, cotton of a fine quality was grown. For it is well known that the yarn for Dacca muslins was spun out of cotton grown round Dacca itself. Sugarcane, again, was a crop which required intensive cultivation and a regularity and abundance of water supply, which were not to be had everywhere. Sugarcane cultivation was, therefore, localized a great deal. Being a very important commodity, *gur* (Indian raw sugar) was, therefore, next to cotton, perhaps the most important trading item in Indian agricultural produce. But the extent of such cultivation was limited. Royle has been quoted above[4] to show that in the

[3] Baden-Powell doubts whether even in an undivided joint-village there was any joint cultivation under the control of the *Panchayat*. He thinks that, even here, there was a *de facto* division of land and the cultivation carried on separately by the different co-sharers. Baden-Powell, *Indian Village Community*, p. 25 (1898).

[4] See above, chap. ii, p. 14.

most favoured cotton tracts as much as one-fourth of the land cultivated was under cotton. But it is doubtful how far this estimate is correct. In 1867 Rivett-Carnac's statistics show that in Berar—one of the most favoured cotton tracts of India—only 27 per cent of the cultivated land was under cotton; and this just at the time of the great extension of cotton cultivation. Even one-fourth, for a specialized crop, is not a great deal, especially when we consider that the major portion of the crop did not go far out of the village. A restriction in cultivation of this nature was a natural result of the self-sufficient character of the village.

We have described some of the remarkable results that the spread of communications and the creation of a market had on the cotton cultivation of India during the sixties. But these effects were specially brought into relief during the period under review. The Lancashire cotton famine was temporary; the Suez Canal, which was an important factor in the increase of India's export trade, was only opened in 1869; just after came the Franco-German war and next the famines. The decade 1870-80 was thus not normal enough to show the effects of the new conditions fully. But even in this decade, the rise in the export of wheat showed the general tendency. The famines temporarily stopped the growth of this trade, and it was during the years 1880-95 that the phenomenal expansion in the export of Indian raw produce took place. This could happen only because, during this period, India was singularly free from any famines of a serious nature. There were local scarcities and failures of rainfall, but there was no widespread famine such as the one in 1876-8 and the two that followed in 1895.

Though an immunity from serious famine cannot be said to imply necessarily a period of prosperity, it at least means for the mass of the population a period free from severe distress. These fifteen years, taken as a whole, were for the agriculturist a period of comparative prosperity. In certain parts this spell of prosperity was broken by occasional local scarcities. For example in 1884-5 there was a scarcity in Bengal, an almost complete failure of the rice crop of Chhattisgarh in 1886 and again in Orissa in 1889. The rains between 1890 and 1895 were irregular over some parts of

the Madras Presidency and the Central Provinces. But in spite of these the period was for the cultivator generally speaking favourable.

By the cultivator is here meant the peasant proprietor or the landowner who was in a position to profit from a series of good harvests and from an appreciation of the value of his produce. For the cultivator who was hopelessly in debt, or for one whose plot of land was not large enough to sustain him, these factors did not make any difference. So also to the landless day-labourer this period meant only the assurance of a somewhat continued period of employment. But to the peasant proprietors not hopelessly in debt the immunity from famine meant a certain relief, and the chance of slightly bettering their condition.

The growing demand for Indian agricultural produce is also an important factor. For this resulted in many cases in a rise of prices of the industrial crops. Not only did the export trade rise, but also the internal trade in agricultural produce was rising rapidly. This enabled a better specialization of crop than had hitherto been possible. This is reflected in such movements as the adoption by Berar of cotton cultivation more and more, until it had to import a substantial portion of its food supply. Sugarcane was, for example, one of the most popular crops at this time, although there was practically no export trade in sugar.[5]

[5] The rise of export prices was not general. Prices of some articles, such as cotton and wheat, went down while the prices of jute, rice and linseed increased a great deal. It will be observed that in the former, India was not an important factor in the world market, and here the prices went down; while in the latter group India was in each case the most important individual supplier to the world market; in this group there was a decided increase in prices.

Statistics of Prices—Export Wholesale
Prices of 1873 are taken to represent 100

Year	Cotton (Broach)	Rice (Ballam)	Rice (Ngastain)	Wheat (Delhi)	Jute (Picked)	Linseed (Bold)
1883	78	109	129	87	96	85
1889	93	144	142	95	192	104
1895	70	147	122	82	175	131

The best standards of agricultural prosperity are, perhaps, the area under cultivation, the nature of the crops grown and the extent of the livestock of the country. In India's case any measurement, by any of these standards, however approximate, is impossible. The agricultural statistics are extremely defective; the first regular compilation of them was made for the Famine Commission of 1880 and was afterwards regularly continued. But Mr Baines' note makes it very clear how defective these were.[6] For the important province of Bengal, there were no reliable estimates ever published before 1897-8.

There are general indications that the area under cultivation was increasing. This increase was due to an extension of irrigation facilities and to new lands being brought under the plough. There were in India at this time no tracts of virgin unexplored soil, most of the new tracts that were now broken into cultivation being waste, or grazing areas, or cleared forest lands. These were generally inferior to the lands already under cultivation, and this movement might be taken as a result of the growth of population in India. There is, at the same time, nothing to show that the yield per acre of the land under cultivation in India was increasing.

There are again no indications that the nature of the crops grown was undergoing any radical change. The food-grains retained a very high proportion in the total. The tendency towards substitution of the better class of food-grains for the inferior ones was marked in the extension of wheat cultivation in the Punjab; otherwise there were no changes in the food-grains group. But with the increase in the area of cultivation there was also a proportionate increase in the area under industrial crops. The crops under which the increases were the greatest were jute, sugarcane, oil-seeds and cotton. It is to be observed that the spread of the cultivation of industrial crops went largely with the spread of irrigation, and as soon as irrigation in any form was introduced in a tract, the more remunerative crops and

[6] 'Statement on Agriculture' by J. A. Baines, Appendix to the *Moral and Material Progress of India (1882-3)*.

intensive cultivation followed. The growth in the different industrial crops was very steady, and its importance consisted in showing the effects of improvement of communications on the agriculture of India. All these crops had been grown for a long time in India in small patches round every village, with the food-grains, for home or for local use. The change that was now coming over India was not so much in an absolute increase in the area under industrial crops. This could not be because India had to grow her own food-supply, and, with increasing population, the area under food-grains had also to rise. But the movement was towards a somewhat greater localization of crops. Thus Berar took increasingly to cotton; the irrigated tracts of the Nira and the Mutha in the Deccan took up sugarcane cultivation and the cultivation of garden crops almost entirely. Such a movement was only made possible by the facilities of transport, which opened a wider market for industrial crops, and at the same time made the import of food-grains from the neighbouring districts possible.[7]

A long period of agricultural prosperity in India also meant an incentive to agricultural improvement. Generally this took the form of digging wells and investing in better cattle. This period was naturally well suited to the introduction of better kinds of crops and better methods of cultivation. The practice of agriculture in India differed widely from district to district, from village to village, and even in the same village from one caste of cultivators to another. In the best cultivated tracts—for example those mentioned by Dr Voelcker: Coimbatore, Mahim, North Gujerat—the standard was very high indeed. But even in those tracts where the actual practice was not high, ignorance of the right methods on the part of cultivators could not always

[7] In the Central Provinces and Berar we see two indications of this tendency; thus the area under cotton in Berar rose from 27 per cent in 1867 to 45 per cent in 1913 of the total area cropped. On the other hand, the area under sugar, which was in the days before the improvement in the means of transport, 40,000 acres in the Central Provinces, had fallen to 21,000 during non-famine years during the first decade of this century. The latter phenomenon was, no doubt, due to greater localization in tracts specially suited to sugarcane, e.g. the United Provinces and Bengal. See C. E. Low, *Hints on Agricultural Economy of the Central Provinces and Berar* (1914).

be deduced. In most parts the value of fallowing, of the rotation of crops and of manures was well understood; and except, perhaps, for the selection of seeds, there was little to be improved upon in the best cultivation. But the practice of all these depended on the circumstances of the cultivator. Thus the scarcity of firewood compelled people to burn their most valuable manure; the pressure on land made them forgo the practice of fallowing, and their poverty, which compelled them to sell the whole crop at harvest-time to pay the money-lender's interest and the Government assessments and consequently to buy their seed every year from the money-lender, prevented any careful seed selection. But the circumstances were not so bad everywhere, and there is no doubt that, side by side with the most developed agricultural methods, were also to be found methods at once slovenly and wasteful.

Thus one of the obvious ways of improving the condition of the agriculturist was an improvement in agricultural methods. It is necessary, therefore, to consider here the policy of the Indian Government towards the agriculture of the country.

In India the policy of the Government has always been an important factor. By 1860 India had been ruled by a foreign Government for a considerable time, and the prestige of Government was such that the people had formed a habit of always looking to Government for the initiative in any measure of reform. This peculiar prestige of Government—especially during the latter half of the nineteenth century—gave it a unique power in influencing the development of India on all sides. This position of Government was greatly enhanced by two factors. One was the illiteracy of the masses. The peasant class of India, though very quick in grasping the profitableness of a new improvement, were naturally not in a position to start any improvements themselves. The other fact was that the upper classes were at this time going through a process of transition, a rearrangement of ideas and modes of thought, which had for the time being left no accredited leaders of society. In short, society all over India was in the melting-pot, and none but Government

had influence enough to start any new movement and rely on a considerable following.[8]

It might be objected that industrial changes come only through the pressure of economic facts and have nothing to do with the action of governments. This proposition is certainly in the main true, and ultimately the facts of the economic world have complete power over the nature of industrial changes. But individuals and governments can also influence the course and the rapidity, or otherwise, of these changes. Thus Robert Bakewell and the Norfolk gentry had certainly a substantial share in furthering the cause of agricultural improvement in England, and the nature of the Enclosure Acts influenced the course of the agricultural revolution. It is merely pointed out here that, on account of the peculiar social conditions obtaining in India in the latter half of the nineteenth century, there was an absence of an influential social class over wide tracts of the country and a lack of that cohesion and correspondence which are essential to any movement of widespread utility. This state of affairs invests with peculiar importance the policy of the Indian Government.

There have been no definite pronouncements on the policy of Government towards agriculture. But the policy—that is, as far as a definite policy existed—can be inferred from the various official publications. The following words of Dr (afterwards Sir George) Birdwood perhaps bring out most clearly the attitude of the Indian Government towards this question. He says: 'The rapid decay of the manufactures of India invests with the highest importance every attempt to increase the number of its exchangeable products. . . . Our best efforts, therefore, must be directed to counterbalance the decline in manufactures by a proportionate development of the agricultural wealth of the country; new raw exchangeable products must supply the place of each manufacture as it in succession fails, if the prosperity of India is to be sustained under the circumstances of her

[8] In matters agricultural this was intensified by the fact that the new educated middle class which got into touch with Western scientific ideas was, in the main, urban, and professional, and had no influence in rural India; while the landed gentry who could influence agriculture were mostly ignorant of scientific methods.

dependent and intimate intercourse with Western civilization.'[9]

The question of agricultural improvement had received some attention in the days of the East India Company. But the first regular associations which interested themselves in the question, though started by Europeans, were not Governmental bodies. These were the Agri-Horticultural Societies; the first of these was started by Dr Carey in Calcutta. Others were afterwards formed at Bombay, Madras and other places. These bodies were generally helped by Government by small annual grants or free land for experimental purposes. The first direct Governmental institutions started were the Botanical Gardens. These were run by an expert, and sometimes had experimental farms attached to them. It might be said that, down to 1866, these two were the main institutions for introducing agricultural improvements. The aim of everybody in these earlier years was the introduction of new plants and exotics. Certainly in some directions they were extraordinarily successful. Witness the example of the tea industry. In Watt's opinion, 'the prosperous industry of tea-planting in India and Ceylon may be said to have emanated from the Botanical Gardens of Calcutta, and to have obtained direct aid from the Government until private enterprise was prepared to undertake its further development.'[1] So also the successful introduction of the potato and cinchona may be cited. No doubt a small number of 'useful trees, ornamental shrubs, and valuable crops'[2] were introduced in these years. There were also many attempts to improve the staple crops like cotton and indigo. The attempts at the improvement of cotton were very numerous, but the only fairly successful one was the introduction of an American variety into Dharwar.

No other definite step was taken by the Government till 1870, when an Imperial Department of Agriculture was created. This was only short-lived and was abolished in 1878, because the co-operation of the provincial Governments was not forthcoming. The whole question was taken up by the

[9] *Moral and Material Progress of India (1871-72)*, p. 27.
[1] G. Watt, *Memorandum on the Resources of British India* (1896), p. 8.
[2] ibid., p. 8.

Famine Commission of 1880, which recommended as a first step the establishment of Departments of Agriculture and also the collection of agricultural statistics. The extent of the improvement already achieved was also reviewed in the report and by many witnesses. It was recognized by many witnesses that the lines on which agricultural improvement in India had been attempted were in a great measure wrong. Some even went to the extent of questioning the possibility of improving Indian agriculture.[3]

The other attempt made during the decade 1870-80 was in the direction of the establishment of experimental farms, with a view to prove to the people the advantage of improved methods and appliances and also to experiment on new methods, etc. Unfortunately most of the attempts proved fruitless at the time. The main reason was 'the universal employment as farm managers of men who had no true agricultural training, such as gardeners, unsuccessful planters, or other officials with equal claims for consideration'.[4] But it was not only that the people who were generally given charge of these farms were inexperienced, but also, whenever even an agricultural expert was brought over from England, he failed because of his ignorance of Indian conditions and the methods of the Indian cultivator. The effect of this ignorance was disastrous and the failure of the farms was necessarily almost complete. This fact had come to be generally recognized by 1880. Mr Buck (afterwards Sir Edward) said in his evidence before the Famine Commission: 'For one thing in which we can beat the native, he can beat us in a hundred things.' The Collector of Ratnagiri wrote: 'The Southern Konkan has nothing to learn from us or America in rice culture.' Mr Buck in his memorandum draws the conclusion that, before introducing any improvement, a patient attention to the study of its application to Indian conditions was necessary. He also emphasizes the desirability of appealing to the verdict of the Indian peasantry. At the same time he points out the

[3] 'Any further attempt at experimental farming and teaching of the ryot is to be deprecated.' Evidence of Mr Toynbee (Bengal) before the Famine Commission, 1880.

[4] R. Wallace, *India in 1887*.

absurdity of condemning all attempts at improvement as hopeless. In proving these contentions he puts forward the case of the improved sugar mill of Messrs Mylne & Thompson, which was already coming widely into use. Messrs Mylne & Thompson had to make an elaborate study of the wants and the capacity of the Indian peasant before they put their mill on the market; but when such a mill had been devised, it was found that, in spite of the alleged conservatism of the Indian peasant, its use spread very quickly. These propositions (of Mr Buck) were on the whole acceptable to the Famine Commission. They recommended the immediate establishment of Agricultural Departments. Nothing was done on these findings. In 1889 Dr Voelcker was appointed to review the whole question. He toured India and brought out his valuable report in 1893; yet, by the end of the century, nothing had been attempted. The mere establishment of the Agricultural Departments was no solution to the problem, and the want of experts was everywhere felt. The work of the experimental farms was continued, its value depending entirely on the individual superintendent.

The introduction of some new staples, and, in a few cases, of slightly improved machinery, had been the only achievements of Government in this direction. Government had also tried to improve breeds of cattle and horses by organizing agricultural shows and keeping studs. These attempts had met with no success, because they were desultory and ill-directed.

Apart from spreading the knowledge of better methods and experimenting on new products, etc., there was a very old method of encouraging agricultural improvement which had been practised by all Governments in India. This method was to remedy the defect of credit in the peasant's economy and enable him to make improvements on his land by giving him loans on easy terms for that purpose. These were called the 'takavi' allowances. The British Government in India gave these advances under terms laid down by the Land Improvements Act (1883) and the Agriculturists' Loans Act (1884). These were small loans given by the Government at a reduced rate of interest, to be paid in

instalments with the land revenue. The trend of the evidence before the Famine Commission clearly showed that they were not taken advantage of on a wide scale. There were many objections to the way in which the Acts were administered. To begin with, the success of the system depended 'upon the energy and the interest of a single individual, this being as a rule the Collector or the Deputy Commissioner of the district.'[5] Therefore in many cases the knowledge even of the terms of the Act was not current in the district. A great deal also depended on getting the advances in proper time, and this with the 'takavi' loans depended entirely on the character of the official in charge; it is not surprising, therefore, that the peasant preferred to go to the local money-lender, from whom he was at least sure of getting the money promptly. Another defect in the system of granting these advances was the great rigidity in the administration of the Act in the matter of collection not only of the interest, but also of the capital.[6] The period allowed for the repayment of the loan was in many cases not long enough. Thus though the interest on these loans was much lower than that charged by money-lenders, they were not very successful. In those tracts where an energetic officer administered the Act on a liberal basis and spread the knowledge of the facilities afforded by Government, they generally became very popular and were largely taken advantage of especially for well-digging.

The scope of Government action was, of course, limited. The convincing demonstration of the superiority of a heavy iron plough to a cultivator whose bullocks were half-fed and utterly unfit to drag anything heavier than the ordinary wooden plough was not of much practical value. The same limitation was apparent everywhere in the introduction of manures or of water-pumps. The root causes of the poverty of the peasant, the smallness of his holding, could not be remedied by demonstration farms and improved appliances. But there was another limitation. This was the action of the trade. Dr Voelcker shows how the action of the wheat trade in London weighed against clean wheat

[5] Dr Voelcker, *Report on the Improvement of Agriculture in India*, p. 85.
[6] *Report of the Indian Irrigation Commission*, chap. vi. (1904).

being brought into the market. An even more striking instance is that of the deterioration in the quality of Indian cotton.[7] The limits of Government action are clearly stated by Mr Jones (Berar) in his evidence before the Famine Commission (1880). He says: 'I am not sanguine regarding the effects of model farms. The first cotton merchant who offered a fraction of an anna more for clean than dirty cotton, did more for Wardha cotton than I, with all the resources of the Government at my back, ever accomplished.' Such were the limitations on Government action. Government could do a great deal in the way of improved methods, better seed selection, etc. But for these to spread and be successful, a patient and an exhaustive study of the wants of the peasant and the means at his disposal was necessary.

[7] This movement had gone very far and resulted in a wholesale ousting of superior varieties by inferior ones, e.g. in Khandesh, the Central Provinces and Berar. This was for the most part due to the fact that the inferior varieties matured more quickly and were hardier; while for the trouble and expense of producing the better grade of cotton the cultivator was not likely to be rewarded adequately. The Indian cotton mills industry had adopted the course of producing inferior counts of yarn and coarse manufactures; there was thus no home demand for the finer cottons, and the difference in price was negligible. The tendency was accentuated by the introduction of steam gins. The use of hand-gins even for seed selection had ceased and the cultivator found it easier to buy his seed from the nearest gin. In the gin all sorts and varieties of cottons were mixed up together, 'the specialization of centuries of natural selection was thus being rapidly effaced by this new phase of commercial production'. G. Watt, *Commercial Products of India*, Article on Cotton (1908). See also, *Cotton Improvement in India, Correspondence, etc.* (Parliamentary paper), especially the memorandum by Mr Mollison.

CHAPTER VI

Growth of Industry, 1880-95

THE fifteen years from 1880 to 1895 were for the agriculturist on the whole favourable. The handicrafts had continued to decrease during this period, and the only forms of industry that showed any vitality were the factory and the plantation industry. The extent of the former was extremely small and its nature restricted in 1880. The Indian factory industry at this time was almost exclusively composed of the two textile industries, cotton and jute. It may be stated at the outset that during the fifteen years under review no great progress was made in any new industry. A few new industries were started, but none achieved any importance. Whatever progress there was, was made in the already established industries such as cotton and jute.

The cotton industry made very good progress during these fifteen years.

Cotton Mills, 1880-95

	1879–80	1884–5	1889–90	1894–5
Number of mills	58	81	114	144
Persons employed	39,537	61,596	99,224	139,578
Looms	13,307	16,455	22,078	34,161
Spindles	1,407,830	2,037,055	2,934,637	3,711,669

This table gives some idea of the progress of the industry. The rate of growth was not very rapid but it was remarkably steady and continuous; and there is an entire absence of any violent fluctuations throughout the period.

The rate of growth became specially prominent after 1885. Of the growth during the whole period Mr Graham Clarke writes: 'The year 1885 seems to have marked a turning

point in the upward climb, and with the great improvements in cotton mill machinery introduced into India about that time, such as ring-spinning and the revolving top-flat card, the mills began to make finer yarns and cloth of more variety and to reach out after new markets for their goods. In the five years from 1885 to 1890 there were added fifty mills which marks the time of greatest expansion. There was a fairly good business and healthy expansion up to about 1897.'[1]

Spinning is still a much more prominent factor in the industry than weaving. But it will be observed that, though during the first ten years the number of spindles grew at a greater rate than the looms, during the last five years an exactly opposite tendency was in operation. Now there is a distinct tendency for looms to grow apace. It was only natural that this should be so. For during the young days of the industry competition with Lancashire in coarse yarns was the most profitable and most likely to succeed; and then the spinning shed was the really important section of the factory. Having grown steadily for thirty years, the Bombay industry had now succeeded in practically killing the home hand-spinning industry and had captured the entire Indian market for coarse yarns. But this was not all; the eighties had seen a remarkable rise in the exports of Indian twist and yarn, the exports being chiefly sent to China and Japan. The success of the Indian twist and yarn was so phenomenal that the Manchester Chamber of Commerce conducted in 1887 an inquiry into the causes of the growth of the Bombay trade. They came to the conclusion that the reasons for the success were chiefly 'geographical'.[2] Whatever the reasons, there is no doubt that these exports grew rapidly and continuously during this decade.

	1879–80	1885–6	1890–1
Exports of Indian twist and yarn in lb.	26,704,716	79,324,341	170,518,804

[1] W. A. Graham Clarke, *Cotton Fabrics in British India and the Philippines*, p. 14 (1907).

[2] *Report of the Bombay and Lancashire Spinning Inquiry* (1888).

But this growth could not go on indefinitely. The capacity of these markets was not unlimited. Moreover about 1890 a change was coming over the Indian trade with Japan. Japan had been all this time slowly building up a mill industry itself, and so it now ceased buying Indian twist and yarn and began to buy Indian raw cotton instead. Therefore, the Indian exports of twist and yarn decreased slightly instead of increasing during the five years after 1890. The Bombay industrialists had, perforce, to turn their attention from spindles to something else. Though the export trade in twist and yarn was checked, the prosperity of the industry was unimpaired.

In the localization of the industry there was very little change. The industry was chiefly centred in the Bombay Presidency and, within the Presidency, in the two cities of Bombay and Ahmedabad. There was quite a large growth of mills in India, but outside Bombay and Ahmedabad they were all scattered over the face of the country and as yet there was no big cotton industry centre outside these two cities. Of the 144 mills in India in 1894-5, 100 were in the Bombay Presidency; out of these, again, 67 were in Bombay city and island.

The progress in the other textile industry—just manufacture—was almost as rapid as in the cotton industry. This growth was reflected in the immense increase in the exports of jute manufactures from India. The jute industry was not able to rely on the home market to the same extent as the cotton industry and there was a close relation between the growth of this industry and the progress of the exports of jute manufactures. The progress in the jute industry cannot be said to have been as continuous. Jute, far more than cotton, is a fluctuating crop, and the demand for the products of the industry is perhaps not so stable as the demand for cotton goods. But the jute manufacturers were a highly organized body and the periods of depression or slackening of demand were generally met with by an all-round short time. Another notable fact in connexion with the growth of this industry was that the rise in the number of separate mills or companies was remarkably small as compared with

the growth in output or the number of hands employed. A glance at the table regarding the cotton mills would show that the number of hands employed and the number of looms and spindles rose during the period in a nearly equal ratio; but in the jute industry the case was different. This indicates that the expansion of the industry took the form of the extension or enlargement of the existing concerns rather than an increase in their number. The average unit of production, then, in this industry increased much more than in the cotton industry.

Jute Mills, 1880-95

	1879–80	1884–5	1889–90	1894–5
Number of mills	22	24	27	29
Persons employed	27,494	51,902	62,739	75,157
Number of looms	4,946	6,926	8,204	10,048
Number of spindles ...	70,840	131,740	164,245	201,217

Out of these 29 mills 26 (and these all the larger) were in Bengal, centred round Calcutta.

Next comes the coal-mining industry. In 1880 it was very small and the wants of Indian railways and manufacturers were very inadequately provided for. The progress of this industry up to 1886 is very slow, but after this date the industry began to progress rather rapidly. The growth of this industry depended intimately on the extension of railways in India and on the freights.

Coal-Mining, 1880-95

	1885	1890	1893	1894
Output (tons)	1,294,221	2,168,521	2,562,001	2,800,652
Number of persons employed ...	22,745	32,971	37,679	43,197
Number of collieries ...	68	82	96	123

The growth was most remarkable during the year 1893-4. This year indeed was the beginning of the rapid progress in mining activity in India that we find taking place during the next twenty years. Even up to 1893, with all the progress made during this period, the coal-mining industry of India was a very small one. Of the total mineral production of India the gold production from the Kolar mines still exceeding the total production of coal in value.

One of the greatest handicaps to a proper extension of the coal industry of India was the question of freights. The railway charges were high. The Bengal coalfields, which produced about three-quarters of the total Indian production, were situated far inland; and even the maritime freights were onerous at this time. This made it impossible for the Bengal coalfields to supply any coal to the west and the south of India. The chief advance made during this period was the capture of the Burma market, and the complete ousting of foreign coal from eastern India. With the extension of the manufacturing industry of Bombay, the imports of coal were steadily rising. On the whole, though the growth was not large, there were clear signs at the end of the period that not only had Indian coal extended greatly in use on the railways, but its use in the manufacturing industry was also becoming more prominent. The exports of coal from India also began during this period. They rose from 26,336 tons in 1890-1 to 53,665 tons in 1894-5; but this was just a beginning, and the actual quantity was insignificant as compared with the more than 800,000 tons annually imported into India. Though the extent of the coal industry was not large in 1895, it then gave promise of rapid future growth.

These three industries—cotton and jute manufacture and the coal industry—still remained the only considerable industries that India possessed. In the financial and commercial statistics of India two other industries—the woollen and the paper mills—are given under separate returns as big industries. But the extent of these industries was very small. For in 1895 there were only six woollen mills and eight paper mills in India, employing in all just about 3,000 and 3,500 people respectively. The general state of Indian

industry can be gauged from the fact that these were, after cotton and jute, the biggest factory industries in India.

Of the plantation industries, tea had by now assumed very great importance. It was one which during the last thirty years of the nineteenth century enjoyed a period of continued prosperity and growth. But except for this there was nothing remarkable in its growth during this period. The area under tea, which in 1885 was 284,000 acres, rose to 433,133 acres in 1896. Assam, i.e. the Brahmaputra and the Surma valleys, still occupied the first position with 67·4 per cent of the total area in 1896. Bengal followed (chiefly Darjeeling and Jalpaiguri) with 24·3 per cent. But there was also a growth of the industry elsewhere—on the Himalayan slopes in the North-West Provinces (now Uttar Pradesh) and the Punjab and in the Nilgiris in the south. The other noticeable feature was that the production of tea was increasing in a greater proportion than the growth in the area under cultivation—a result largely due to better methods of cultivation and increased use of machinery in the manufacturing processes. The condition of labourers in the industry had slightly improved, but the evils of the system of recruiting still remained and Kumar Dakhineswar Mallia—a member of the Tea and Coal Labour Commission—denounced the system in 1896 as a 'vile pest to society'.[3]

The cultivation of coffee was almost wholly confined to Mysore, Coorg and the Nilgiri and Malabar districts of the Madras Presidency. Till about 1879 the industry was fairly prosperous, 'but during the ten years from 1879 to 1888, depressed prices combined with the havoc wrought by the borer and the leaf disease greatly discouraged coffee planting in India and Ceylon and the prospect of the industry seemed so forlorn that both in Ceylon and India much coffee land was placed under tea'.[4] The depressed prices were due to the dominant position of Brazil in the coffee market and the greater and greater production of cheap Brazilian coffees. The situation was made worse by the fact that nearly 96 per cent of the Indian coffee was grown for export and there

[3] *Report of the Labour Inquiry Commission on the Coal and Tea Industry* (1896). Note by Kumar Dakhineswar Mallia.

[4] *Annual Note on the Cultivation of Coffee* (1896).

was no home market to fall back upon. But there was a sharp rise in the price of coffee in 1889 which was maintained till 1896. The rise was mainly due to political troubles in Brazil. The industry therefore was revived and enjoyed a period of brief prosperity from 1889 to 1896. The replacement of coffee by tea had been almost complete in Ceylon, but in India the movement had not gone very far and was now definitely checked.

The third plantation industry, i.e. the indigo industry was almost stationary and there is nothing to record in its growth. Mr O'Connor says about the trade in indigo: 'This is one of those long established trades of India like opium and silk which give no indication of progress'.[5] The same might be said about the industry. Yet there was a certain amount of increase, for in 1894-5 the exports of indigo from India reached the highest point that they were ever destined to reach.

For the rest, there were other industries which carried the raw material only a stage forward, thus facilitating its export or its further use in advanced stages of industry. The main representatives of this class in India were the cotton and jute pressing industries and the rice and timber mills. These industries employed during their season a fairly large number of people. There was a very definite limit to the growth of such industries in any particular tract. Of these the most rapid growth took place in the rice and timber mills—an industry which was, as yet, mostly confined to Burma. The lac manufactories were, in their nature, somewhat analogous to this group and there was a fair growth in their numbers.

Then again there was the class of auxiliary industries which specially came into prominence because of the extension of railways in India and the growth of manufacturing industries, e.g. the engineering workshop and the iron and brass foundries. This was a growing class, but its extent was limited by the amount of extension in the use of machinery in India.

Lastly might be noticed the class of semi-factory industries. Of these the most important—the Madras tanning industry

[5] J. E. O'Connor, *Review of the Trade of India, 1880-89*, p. 36.

—was a very flourishing one. The spread of the industry throughout the more important towns of the Madras Presidency was rapid and its general growth was reflected in the rapid extension in the number of tanned and half-tanned hides and skins exported out of India. It is interesting to observe that the industry, which was obviously very paying, was confined to the Madras Presidency, though there were large exports of raw hides and skins from other parts of India. A somewhat similar industry was the brick and tile industry of the Malabar coast—an industry first introduced by a missionary settlement in Mangalore, and which rapidly spread from there as soon as its success became apparent.

On the whole, during these fifteen years—especially during their latter part—there was a certain amount of quickening in the development of Indian industries. The bigger and the already established industries grew at a rapid pace, and there was fair growth in the auxiliary and the smaller industries. The prospect for Indian industrial development looked hopeful and Mr Justice Ranade, reviewing this progress in the early nineties, observed at the end of his remarks on the 'Present State of Indian Manufactures': 'I have placed before you what appear to me to be good grounds for the hope I entertain, that India has now fairly entered upon the path which, if pursued in the same spirit which has animated its capitalists hitherto, cannot fail to work out its industrial salvation.'[6]

From the growth of the industry one naturally turns to the condition of the labour force in the industry. It has been pointed out above that in the old Indian economic structure there was no place for the casual general labourer. One of the first things that created the demand for this class was the operations of the Public Works Department: and this demand was intensified by the growth of the factory industry in India. It is impossible to generalize about the classes from which this labour was drawn or its living conditions; and the matter must be considered separately for each industry.

In the cotton industry in Bombay city itself the labour supply was chiefly drawn from the Konkan and Deccan districts of the Bombay Presidency. It was largely composed

6 M. G. Ranade, *Essays on Indian Economics*, p. 118 (1898).

of the landless labour class, which was growing rapidly in India. In Ahmedabad, another centre of the cotton industry, the labour supply was mostly local, i.e. drawn from the surrounding country districts. In the cotton ginning and pressing industry the labour was entirely local—and here the labour was mostly of old women. In the Calcutta jute industry the labour employed up to about 1885 was entirely local, but, henceforward, with the expansion of the industry and the need for more labour, labourers from the North-West Provinces (now Uttar Pradesh) and Orissa had to be imported. The proportion of this foreign labour was a steadily growing one. The Bengal coal-mining industry was also growing rapidly, but the demand for labour till the end of this period was generally satisfied by the supply of the local aboriginal labour. In most other places, wherever there were any industries, labour was local, except in Rangoon, where during the rice-milling season the labour for loading and unloading had to be imported from Madras.

The question of the regulation of the conditions under which labour worked was first broached in 1875 by the appointment of a committee by the Bombay Government to inquire into 'the condition of the operatives in the Bombay factories and the necessity or otherwise for the passing of a Factory Act'. This committee was divided on the question of the necessity for passing a Factory Act. The manufacturing interests and a large proportion of the public in India were generally opposed to any measure of this sort. After numerous bills had been drafted the first Act was finally passed in 1881. This Act was of a very elementary character. It only provided for the regulation of the working hours of children below 12 years of age. Children below 7 were not allowed to work in the factories and the working hours of children between 7 and 12 were fixed at nine. There was some provision for the fencing of machinery, but an entire lack of any sanitary provisions. The Act was meant to apply only to factories employing 100 or more hands and using 'mechanical power'. From the scope of the Act the tea, coffee and indigo establishments were excluded.

It was soon found that the provisions of this Act were

entirely insufficient to safeguard adequately the interests of the operatives. Another committee was appointed by the Bombay Government, but no general modifications on the lines recommended by the committee were adopted. Lancashire and Dundee were all this time complaining about the unfair competition of India on account of the lack of a Factory Act.[7] The opinion in India itself—especially in the Bombay Presidency—in favour of further legislation on the matter was also growing. At last the Indian Government appointed a Factory Commission in 1890. An Act, largely based on the recommendations of this Commission, was passed in 1891. The advance over the former Act was that the Act now embraced all factories employing fifty hands, provided for a weekly holiday, fixed the minimum limit of the age of children employed at 9, and fixed the working hours of children between 9 and 14 at a maximum of seven. It also fixed the working day for women at eleven hours and prohibited night work for them (a provision which was largely vitiated by the exception made in the case of a shift system approved by the Local Inspector of Factories). It also made some provisions as regards sanitation and the inspection of factories.

But whatever legislation there was, it was very restricted in the scope of its application. The real restriction which robbed the Act of its value before 1891 was the application of the Act only to factories employing 100 or more hands. For it was the small factory in which the worst abuses existed. Another restriction was that the Act applied only to factories working more than four months in a year. On account of this provision a large proportion of the concerns engaged in seasonal industries, e.g., ginning and pressing of cotton and rice-milling, escaped from the operation of this Act.

On the other hand there was no legislation at all on behalf of the labour force in the mining industry. Women were extensively employed in all mines—especially in Bengal—and it was feared that any 'legislative interference would tend to hamper the development of the industry which was

[7] *Annual Report of H. M. Inspector of Factories* (1895). Note on Factory Legislation in India.

yet in its early stage'.[8] So far, then, as the regulation of the working conditions on the part of Government went, a great part of the modern industry in India was outside its scope; and it was only after 1891 that factory legislation can be said to have become fairly effective.

The really important thing is not so much the nature of the Acts passed as the light that the inquiries throw on the working conditions of the factory labour in India. It was only in Bombay and Bengal that there was a factory industry of any extent. The reports from all the other provinces generally insist on the fact that the industry is so small that no separate legislation is required for it.[9] But even though there was a uniform lack of regulation, the conditions differed widely from place to place.

The hours worked in the Bombay mills were, for males over 18, twelve and a half hours: for females over 18, eleven and a half hours; for young persons, i.e. from 14 to 18, they were the same as those for adult males, and for children from 7 to 12 they were nine.[1] These were the normal hours in the big mills, but they were exceeded in cases of pressure of work. Until the introduction of electric light into the mills there was a natural check on these hours—the maximum possible being fourteen in summer months. Before 1881 the children worked the same hours as adult males but the Act of 1881 lowered them to nine. The regulations, however, were not always enforced; and evasion was frequent. For example, the Central Provinces report (1889) on the working of the Factory Act states that in the Jabalpur mill both adults and children worked from sunrise to sunset—the only difference between their hours being that the adults had only half an hour's rest at midday while the children rested for an hour. As regards the working hours of women they were a little shorter in the Bombay industry than those of men, but in the up-country mills the hours were generally

[8] *Employment of Women and Children in Mines, Correspondence, etc.* [Parliamentary Paper], (1893).

[9] *Reports of the Working of the Indian Factory Acts* [Parliamentary Paper] (1889).

[1] Hours worked in 1889. The hours of children were regulated by law. Figures taken from a table from the Bombay report in the above Parliamentary Paper.

the same. Though the men did not complain much about these hours they at least wanted a weekly holiday. In the Bombay industry the workers got only five complete days during the whole year;[2] and even in mills where a regular weekly holiday was given the labourers were supposed to attend, for at least half the day, for the purpose of cleaning the machinery, etc. The real abuses, however, did not exist so much in the spinning and weaving mills as in the cotton ginning and pressing industry. Here the Khandesh industry was the worst. The evidence before the 1884 Factory Commission was of a terrible nature. One witness stated: 'In the busy season—that is in March and April—the gins and presses sometimes work both night and day and the same set of hands work both night and day, with half an hour's rest in the evening. The same set continue working day and night for about eight days.'[3] It was all the worse because the hands were mostly women. Another witness stated: 'The women are looked on as part of the gins, and they belong to the establishment, and two or three hours is the longest time they can be absent out of twenty-three without any notice being taken of it.'[4] After working eight days without stopping, 'they (the gins) are compelled to get another set of hands from Bombay'.[5] All the other evidence on the Khandesh ginning industry was of the same nature.

As in the matter of working hours, so also in the matter of sanitation and ventilation the smaller concerns were the worst. In the bigger ones, which mostly came under the working of the Act, the sanitation, the ventilation and the fencing of machinery were fairly satisfactory. But apart from the big industry, the conditions were not so good. The worst offenders in this respect were the cotton and the wool cleaning establishments in Bombay. Of one of these Col. Meade King remarks: 'I considered this place (in the absence of proper means of ventilation) utterly unfit for human beings

[2] *Annual Report of H. M. Inspector of Factories* (1886-7). Note by Mr Jones on 'Factory Conditions in India'. See also evidence of Mr Cocker before the *Bombay and Lancashire Spinning Inquiry* (1887).

[3] *Report of the Bombay Factory Commission*, p. 11 (1885).

[4] ibid., p. 13.

[5] ibid.

to work in.'[6] On the small mills and factories he further remarks: 'In two-thirds of the works visited I have observed dangerous—in some cases *most* dangerous—machinery, mill gearing, fly wheels, etc., without any fencing whatever about them, and the marvel is that accidents are not of more frequent occurrence than they are.'[7] But he adds: 'I am disposed to think that the want of ventilation and the proper means of carrying off injurious dust and gases is of even more vital importance than the fencing of machinery.'[8] The abuses, then, that existed in the Bombay Presidency were chiefly in the small non-regulated industry; and here the conditions were truly terrible.

Perhaps the most vehement opposition to factory legislation of any nature came from the Bengal Chamber of Commerce, and the then Governor of Bengal (Sir Ashley Eden) stoutly opposed the bill in the Viceroy's Council. Whatever might be said of this attitude, it must be admitted that the conditions of work were perhaps the best in Bengal—especially in the Calcutta jute mills industry. The regular hours for running the mills were the same in the Calcutta mills as in the Bombay industry—sunrise to sunset. But the mills in Calcutta were worked on a somewhat complicated shift system and the work-people were individually employed on an average for about nine hours a day rising sometimes to ten. The exception to this rule were the weavers, who generally worked the whole day.

The Bengal workers also got a full Sunday holiday every week, and this no doubt counted very greatly in favour of the health of the working classes. The internal condition of the factories is described as generally well-ventilated and clean and the fencing of the machinery as effective.[9] There was another matter also in which the Bengal labourer was better off than his brother in Bombay. This was in the system of payment of wages. In Calcutta these payments were made weekly and, at the most, from about three days' to a week's

[6] Letter of Col. Meade King (Inspector of Factories) to the Bombay Government, July 1882.

[7] ibid.

[8] ibid.

[9] Report of the Magistrate of 24 Parganas. See *Report of the Working of Factory Acts* (1889).

wages were kept in hand. But in Bombay the pernicious system of monthly payment of wages prevailed and nearly three weeks' wages were kept in hand.[1] In this matter Bombay City was the worst, for even in Ahmedabad payment was weekly.

There were during this period no inquiries into the condition of Bengal labour like the two Bombay Commissions. It is, therefore, not easy to know what were the exact conditions obtaining in the jute-pressing and the other up-country industries. They must have been a little worse than in the big industry but it cannot be said whether they were as bad as in the Khandesh gins. This, however, does not seem likely, as the local supply of easily exploitable labour in Bengal was much less than in the extremely poor province of the Bombay Deccan. Of the other stray factories and small industries much need not be said. The working conditions here depended very greatly on the individual manager or proprietor and the general condition of agricultural labourers in the surrounding district. Generally speaking, the hours and the conditions were more or less the same as in the Bombay cotton industry, in places perhaps a little worse.

Lastly, in the coal-mines there were no regulations whatever. Women and children were employed extensively underground in Bengal. In the Central Provinces, where the labour was mostly immigrant labour from the North-West Provinces, very few women were so employed, and the opinion here was in favour of entirely prohibiting such employment of women. But in Bengal any suggestion of such interference was hotly contested. Here the 'family' system of working prevailed. The workers were mostly drawn from the local tribes of Sonthals and Bauris; they worked with their women-folk, the man cutting the coal and the woman carrying it. As yet very few attempts had been made to get the immigrant labour from the North-West Provinces, but the rapid expansion of the industry was now making the want of a steady supply of extra labour severely felt.[2]

[1] This system persists today and has been largely held responsible for the indebtedness among the Bombay factory hands. See *Indian Co-operative Studies*, Essay No. iv, 'Co-operation among Factory-workers', by Messrs Devdhar and Joshi (1920).

[2] *Report of the Labour Inquiry Commission, Bengal* (1896).

CHAPTER VII

The Agriculturist, 1895-1914

THE long period of fifteen years of comparative immunity from famines came suddenly to an end in 1895, and the periodical visitations of famines fell with extraordinary force on India during the years that followed. Two severe famines followed each other swiftly and made the closing years of the nineteenth century one of the worst periods in the history of Indian agriculture.

The famine of 1896-7 spread almost all over India. The only parts that were not affected by the drought were Lower Burma and the extreme south of the peninsula.[1] The Famine Commissioners had remarked in 1880 that the famine of 1876-8 was the severest in the country, but the famine of 1896-7 was spread over a wider tract and was quite as severe. The remarkable feature about this famine was that it visited parts which had hitherto been thought to be immune from famines. Thus it found Berar, which had been free from famines for sixty-four years and thus lulled into security, without any preparations to combat the evil.[2] The number supported on relief works was again very considerable; but the actual conduct of the works was better and much more efficient this time than it had been in the previous large famine (1876-8). This time the officers in charge had the benefit of the guidance of the findings of the 1880 Commission. These were found to work, on the whole, very well in this famine, and the Commission of 1898 recommended only some minor alterations—chiefly in the direction of a more liberal treatment of those on relief—in them. Naturally the relief administered was not on the same basis everywhere and the Commission found the conduct of certain Provincial

[1] T. W. Holderness, *Narrative of the Famine of 1896-7* [Parliamentary Paper].

[2] The same was the case with Gujerat in the famine of 1899-1900. This tract had been free from famines since 1812.

Governments—especially the Bombay Government—in the matter of granting relief and the remission of assessments, etc., niggardly.[3]

But by far the most interesting part of the report of these Commissioners is their estimate of the condition of the agricultural classes in 1895 and also how far they had progressed during the fairly prosperous period, 1880-95. They find that in India as a whole there had been a considerable increase in the income of the landholding and cultivating classes on account of the rise in prices. 'Their standard of comfort and expenditure has risen', so their powers of resistance against famines had risen; but, the Commissioners remark, 'whether it can be safely said that they have much improved in thrift, that is, in the accumulation of capital, is open to doubt.' But, though the general powers of resistance against famines had risen, one of the most important safeguards in old times against such calamities had fallen into disuse. 'The export trade and the improvement of communications have tended to diminish the custom of storing grain which used to be so general among the agricultural classes.' If the landholding and cultivating classes had, in their opinion, undoubtedly profited from the rise in the prices of food-grains, this was far from being the case with agricultural day-labourers—a class which was a rapidly increasing one. Of this, together with the lower strata of the artisan classes, the Commissioners say: 'The wages of these people have not risen during the last twenty years in due proportion to the rise in price of their necessaries of life'; further on: 'This section of the community lives a hand to mouth existence with a low standard of comfort and abnormally sensitive to inferior harvests and calamities of season.' 'The experience of the recent famine fails to suggest that this section of the community has shown any larger command of resources'—and about the extent of this class, 'far from contracting, it seems to be gradually widening, especially in the more congested districts'. These conclusions are strengthened when they show the condition of the different classes in India province by province. In Bengal the resisting power of the people had generally risen since 1873-4, but as regards the petty agri-

[3] *Report of the Indian Commission*, chaps. iv and v (1898).

culturists and the labouring classes in Bihar, they did not seem to have profited by the rise in the prices of food-grains. The Deccan districts of Madras—which was one of the tracts most liable to droughts—had been gradually improving their condition before 1876. But the famine of 1876 had hit them very hard and left them much impoverished; the progress they had been able to make since then had been very slow, and on the whole there did not appear to be any general improvement nor a general decline. As regards the Bombay Presidency the Provincial Government held the view that the last famine showed a remarkable increase in the powers of resistance of the cultivators of the Deccan and the southern Maratha country. About this the Commissioners write: 'We are not really capable of criticizing this opinion, but it seems to us to be rather too sanguine a view of the situation.' The North-West Provinces Government also drew the conclusion that the cultivating classes, both tenants and proprietors, had greatly improved their position, but that the labouring classes had not shared in the general prosperity. The Famine Commissioners qualified this statement as regards the small proprietors and cultivators south of the Jumna, generally. In this tract they failed to find any signs of improvement. In the Central Provinces the Government thought that the cultivators had very much strengthened their position; but here again the Commissioners differ. They say: 'There is evidence that many of the old malguzars and old tenants have fallen hopelessly into debt, while others are just able to maintain their position in years of ordinary prosperity. The labouring classes, we believe, live in tolerable comfort in ordinary years but they save nothing for bad years and there are no signs of increased resistance on their part.' In the Punjab the conditions were slightly better. Here a greater part of the province was protected by irrigation than was formerly the case and the cultivators were fairly well off, but in congested districts there was a great deal of subdivision and indebtedness among the small owners. 'The labouring classes in this province are fairly well off and frequently able to save from their earnings.'[4]

[4] For the above account see *Report of the Famine Commission*, chaps. i, ii and iii (1898).

The conclusions of this Famine Commission have been given rather in detail, mainly because they are, perhaps, the most authoritative on the question of the prosperity of the people, and also because they help to show the entire dependence of the large majority of the Indian populace on the nature of the seasons. The famine of 1896-7 was a great shock to the agricultural classes of India. But this was not all. Hardly had the people begun to recover from the famine when another season entirely failed over a large part of India. The famine of 1899-1900 was not so widespread but certainly was very severe. During these years Bengal and Burma had good rice crops and the distress was not acute in the North-West Provinces, Oudh and the Punjab; in the south of India the Madras Presidency suffered a great deal, but the most distressed parts were the Bombay Presidency, the Central Provinces and Berar, a major portion of the Nizam's Dominions and a great portion of Central India.[5] And wherever there was distress the form of it was acuter than ever, especially in those tracts of the south where the famine of 1896-7 had also fallen very heavily. This will be seen from the fact that though the famine of 1899-1900 did not cover so wide a tract as the two earlier famines (1896-7 and 1876-8) the numbers of people who resorted to famine works this time far exceeded those of any previous famine; and the cost of administering the relief came to about fifteen crores of rupees. No doubt, a part of this might be and was attributed to a liberal granting of relief and laxity of tests. This was shown by the fact that the percentage of people relieved differed from district to district, though the acuteness of distress might be the same in all. Thus in the Betul district of the Central Provinces as many as forty per cent of the population were relieved, while the percentage in the adjoining districts was much smaller. There was also the fact that at the end of this famine the people did not leave the relief works as readily as they did in other famines. This can be attributed to the very high wage that they were earning on the relief works,

[5] *Paper Relating to the Famine and Relief Operation in India, 1899-1900,* Nos. 80 and 81 [Parliamentary Paper].

but it might also be due to the fact that, having suffered from two famines in quick succession, the people were not quite as confident as before that a good season had really set in. This second famine was specially notable for the very high mortality amongst cattle. It has been remarked above that this is one of the main features of an Indian famine.[6] The dearth of fodder crops was remarkable in 1899-1900 and the mortality among the cattle in Gujerat was terrible. This was all the more unfortunate, because the Gujerat breeds were amongst the best and most improved in India, and the very careful cultivation of the Gujerat peasants depended on the high quality of their cattle. Government took special measures to cope with this fodder famine; some forests were thrown open; in other cases Government took measures to cut down grass in the forests, bale and press it, and then sell it to the people. The Central Provinces supplied a good deal of fodder to Gujerat, but the insufficiency of rolling-stock on the railways prevented the supplies from being utilized to their full extent.[7]

These two famines were truly very great calamities. Their effects were manifold, weakening the health of the people and undermining their *morale*. They made the masses easy victims of epidemics of cholera and plague; but, as pointed out in a previous chapter, their worst effect was in putting back the clock of agricultural progress. Almost all the progress that had been made from 1880 to 1895 was lost over wide tracts of India during these disastrous five years. Two of the most immediate effects of these famines in the domain of agriculture were (*a*) the decline in the double-cropped area, (*b*) the displacement of the industrial crops and the export crops by foodgrains. For example, in the Central Provinces, except for a growth in the area under cotton, there was a general retrogression in the area under all crops, and on account of a rapid succession of bad harvests the

[6] 'After all a fodder famine is the worst calamity that can befall the people; it does not necessarily come whenever there is a food famine, because it may happen as in 1896 that the kharif crops grow large enough to give a supply of fodder, though yielding little or no grain.' W. H. Moreland, *Agriculture of the United Provinces*, p. 122 (1912). 'The emergency cannot be met by the individual cultivator to any great extent' (ibid., p. 123).

[7] See *Papers Relating to Famine, 1899-1900*, Nos. 82-90.

practice of double cropping had practically disappeared.[8] In the United Provinces, where the famine of 1899-1900 had not been felt, the area under double crops had risen, but this rise was very slow as a result of the earlier famine. The famines had also the result of decreasing the total area under cultivation; this was the case in the United Provinces and also in the Bombay Presidency, but the result in this matter was not quite so marked in the Central Provinces. The second result was the substitution of food-crops for the export or industrial crops, or even the substitution of inferior food-crops in place of the more remunerative ones—especially because (as was generally the case) these inferior crops were also the hardier ones. For example, in the United Provinces indigo and oil-seeds were to a very large extent replaced by food-grains; in the Bombay Presidency this same tendency was very much marked, and in the Central Provinces wheat, grain, linseed and rice had all been replaced to a large extent by the less remunerative millet crops. It may be remarked here that this latter effect was perhaps not very lasting. In a few years' time after the famine, with the advent of good seasons, the balance between the different crops was regained. The same cannot be said of the area which goes out of cultivation or the decrease in the area double cropped. But the really harmful effect of the danger of famines is that they prevent the cultivator from adopting a more remunerative but a more delicate crop, and also discourage him from investing too much in the land in the way of manures, etc., except where the land is irrigated and thus protected from the variability of the seasons.

The fourteen years from the beginning of the twentieth century to the outbreak of the war were fortunately free from any such complete failure of harvests as the two in the last decade of the nineteenth century. But neither were the seasons very propitious. The opening years of the new century did not bring very good harvests. In Bengal and Bihar nearly all the first seven seasons were unfavourable and in Madras Presidency the whole of the first decade saw seasons which were below the normal. There were also individual

[8] *Report on the Moral and Material Progress of India, 1891-2* and *1901-2*. Sections on Agriculture.

years which brought drought in certain provinces, such as the year 1902-3 in the Central Provinces, and the year 1905-6 in the United Provinces and the Punjab. But the worst year of this decade was 1907-8. The distress that year was very general throughout the United Provinces and large relief works had to be opened. The season was also very bad in the provinces of the Punjab, Bengal, Central Provinces, Bombay and Upper Burma; and relief on a small scale had to be granted throughout almost all these provinces. But the seasons after 1909 were on the whole favourable, and in 1914 India may be said to have been in a period of mild agricultural prosperity; and as to the general condition of the landholding and cultivating classes of India, it might be said safely that they finished the period a little better off than where they began at the beginning of the century. For though the cultivators had gained in material wealth during 1880-1895, they were the hardest hit on account of famine. (The agricultural labourers are, of course, excluded from this, for though they gained no ground during the period of prosperity, they were precisely the class who suffered most in the time of famines.) A great deal of the ground gained by the cultivating classes during the fifteen years previously was lost by them during the closing years of the nineteenth century. After the second famine they began at a low level; but the circumstances in most parts of the country favoured a more or less rapid recovery. The rise in the price of food-grains, which became particularly marked during the first decade of the twentieth century, helped the land-owning classes a great deal. The spread of communications and of improved methods of cultivation, however slow, placed the actual cultivator in a more favourable position.

It is interesting, at this point, to see what changes in the area under cultivation and the crops had taken place during the period.[9] The five years from 1895 to 1900 have to be left out of account because they were entirely abnormal and the fluctuations in famine times cannot give any idea of the general tendencies. Though the total area varied a great deal from year to year on account of the nature of the seasons,

[9] See table at the end of the chapter.

there had been, on the whole, a very real growth in the total area under cultivation. An important cause of this growth was the extension of irrigation—especially in the Punjab, where the canal colonies were created during this period. But this also indicated a real growth in the number of lands on the margin of cultivation being brought under the plough.

With this extension in the area under cultivation the first query is what percentage of this total is occupied by food-grains? In 1901-2 the percentage was about 88 and in 1913-14 it remained much the same. The steadiness in the percentage of the area under food-grains, though the total area under cultivation increased, is a remarkable fact; and, indeed, the agricultural statistics of this period show this same steadiness of proportions everywhere. With a few exceptions like gram or fodder crops there is no remarkable rise in the areas of crops. The rise is in most cases proportionate to the rise in the total area under cultivation. Rice retained its position as the most widely cultivated of all. The only important change in proportions was that the area under wheat had risen a great deal; but here it must be remembered that the area under wheat was liable to somewhat wide fluctuations. This rise in the area under food-grains was necessitated—as in a previous period—by the increase in the population. The Indian subcontinent is not a food-exporting area to any great extent. Rice and wheat are the only important food-grains to be exported. The large crops of pulses and the minor food-grains like the millets are, almost wholly, retained for home consumption. In rice even, India must be considered apart from Burma. The rice exports of India consisted mainly of Burma rice; and the tendency was marked during this period for Burma rice to take a larger and larger proportion of the rice exports of India; in fact Bengal itself had begun regularly to take in rice supplies from Burma. As regards wheat, which was the largest crop excluding rice to be exported, only about 10 per cent of the total crop grown was exported in normal years.[1] Even in wheat the exports fluctuated enormously and even a slight scarcity in India was enough to curtail the

[1] F. Noel Paton, *Indian Wheat and Grain Elevators* (1913).

exports of the crop. As a matter of fact, the exports of food-grains in fair years did not show that India was a food-exporting country. These exports are rather to be considered as a reserve against famines; only instead of being stored, as of old, these surplus crops of favourable years were exported; and the slightly extra area under food-crops, beyond what would be necessary to meet the home demands in average years, was a guarantee against the variability of seasons. The same fact is emphasized by statistics, which show that the increase did not take place only in the areas under rice and wheat but also in jowar, bajra and other inferior food-grains which were not exported out of the country. That is why it can be asserted safely that the increase in the area under food-grains was necessitated by the increase in the population. The bulk of the new area brought under cultivation was, then, taken by the food-crops; and the bulk of the peasantry was still engaged primarily in the production of food supply for the home and the local market.

Among the industrial crops the areas occupied by oil-seeds and cotton were the most important. The oil-seeds area had grown steadily during these fifteen years and their percentage of the total had slightly increased since 1901-2. Naturally, there were somewhat wide fluctuations from year to year among the individual constituents of this group. But the three main crops—linseed, sesamum, and rape and mustard—had maintained their position. Of the others, groundnut had recovered from its decline towards the end of the nineteenth century and the introduction of new varieties had helped it to improve its position. Oil-seeds were largely an export crop; especially was this so with some constituents of this group such as linseed and ground-nut.

The area under cotton had also increased steadily. Cotton, of course, could not be grown all over India and this increase in area, which was large, was chiefly due to the increase in the proportion of land occupied by cotton in the cotton tracts. Jute was even more largely restricted to a particular area, viz. Bengal, than cotton. But the proportionate increase in the area under this crop had been even greater. Many attempts had been made to introduce the cultivation of jute

in other tracts but most of them had failed; and jute continued to spread in the restricted area of Bengal. The areas under the other important industrial crops, such as opium and indigo, definitely declined. In the former case this was due to the 1907 agreement of the Government of India with the Chinese Government, and in the latter to the competition of synthetic indigo. Fodder crops had grown remarkably in popularity. The cultivators had come to realize that these crops were very necessary for the proper feeding of their cattle. They had also been found to be very remunerative, and very useful as rotation crops. The area under sugarcane was almost stationary and in some places slightly declining. The area under this crop declined by nearly 20 per cent during the years 1890-1910,[2] but towards the end of this period it was recovering slightly. All the statistics, indeed, show prominently the fact that the character of Indian agriculture as regards the crops grown had changed but slightly during these fifteen years. The food-crops grown chiefly for local consumption continued to occupy the premier place; and even in the industrial crops, the increases in the area under cultivation took place mainly in the already well established crops such as cotton, jute and the oil-seeds, while the decreases under indigo, opium and sugarcane were due to peculiar causes connected with their individual industries.

The statistics of yield are unfortunately lacking, and the figures given for livestock, ploughs, carts, etc., are only estimates and, therefore, entirely unreliable for a comparison over a number of years. We are thus thrown back again on a consideration of the work of Governmental agencies for an estimation of the extent of improvements in the methods of cultivation. Such an improvement must always play a large part in the agricultural economy of any country. The Government departments continued to be the chief agency for disseminating this kind of information. They were the most suitable; for the cultivator, when he saw that the officials themselves were interested in a certain innovation, was prepared to try it even though he was always sceptical about its results. Though a certain amount of agricultural progress

[2] F. Noel Paton, *Sugar in India* (1911).

had been achieved in the nineteenth century by a number of Government agencies in the way of introducing exotics and certain other improvements, there had been, then, no concentrated and organized effort in this direction. The Agricultural Departments had been, no doubt, in existence in the provinces for a number of years, but their lack of concert and—a very important thing—the want of permanent experts had prevented them effectively from doing any solid work. The first step in bringing together these scattered forces was taken under the administration of Lord Curzon. The most important step was the appointment of an Inspector-General of Agriculture for all India in 1901. This gave the various Agricultural Departments, for the first time, a head who was also an expert in agricultural matters. This step was followed by the establishment of an Agricultural Research Institute, a few provincial agricultural colleges, and a few schools. That Government had realized the necessity of doing something towards this object —not merely in a haphazard manner—was shown by an increasing expenditure on the Agricultural Department. The period of one decade was too short, the staff of the Departments as yet too small and too scattered, and the expenditure on this all important matter too niggardly, to show any very definite results before the end of this period.

The improvement of cotton has always been one of the favourite subjects of all agriculturists in India. In this matter a few exotics were introduced and various experiments on indigenous varieties carried out—especially in the Madras Presidency. One of the greatest obstacles to any improvement in the quality of cotton had always been the difficulty of the cultivator in getting pure seed;[3] and the very common practice of resorting to the local gin for the seed-supply has acted very unfortunately in this direction. An attempt was made to combat the evil, to some extent, by the establishment of seed farms which were used for the dual purpose of the selective breeding of varieties and the distribution of improved seed. But above all the impetus

[3] *Vide* the instructive history of the rapid spread of Cambodia cotton and the deterioration in its quality. J. Mackenna, *Agriculture in India* (1915), also *Report of the Indian Cotton Committee*, chap. xvi (1919).

towards an improvement in the quality of cotton came by the creation of a market for cottons of a higher quality. This was the result of certain causes which had compelled the Indian mill industry to turn its attention towards the production of goods of a finer quality than they had been used to produce hitherto. The market for these finer cottons was as yet very small, but it was an expanding one, and in it lay the real hope for the improvement in the quality of cotton.

Wheat as an export crop had been increasing in importance and attention was, naturally, directed towards making the wheat grown for export suit the requirements of its foreign market. One of the most important branches of research work carried out in India was an investigation into the different varieties of wheat grown in the country and determining the localities to which these different varieties were best suited. The question of preventing rust and destruction by insects during storage also came up and many advocates were found for the introduction of the grain elevator system in India. But the practicability of this step was questioned and the issue is still in doubt.[4]

These are a few examples. The problems calling for attention were very varied. They concerned almost all the staples of India. The introduction of new varieties of rice was tried with success in some parts; improved and early growing varieties of ground-nut suitable to the foreign market were introduced into cultivation. In the latter matter the experiment most successful was the introduction of ground-nut cultivation into Upper Burma. Apart from improvements in the crops, experiments were made in improved implements and artificial manures. Something had been gained from the numerous failures of the last century, and more attention was now paid to the requirements of the cultivator and his financial capacity. Light iron ploughs and small pumps for water lifting were taken up in many parts. One of the instances of these varied activities was the establishment of a Fisheries Department in Madras under

[4] A. and G. L. C. Howard, *Wheat in India* (1909). See also F. Noel Paton, *Wheat*, etc. and *Report of the Royal Commission on Agriculture in India*, pp. 404-5 (1928).

Sir Frederick Nicholson. This introduced, especially along the Malabar Coast, improved big nets—worked on a co-operative system—also improved methods of fish curing and the establishment of sardine oil and guano manufacturing establishments.[5]

But after all, the improvements effected were of no revolutionary nature. They were limited in their scope and did not always reach the class of peasant proprietors. The work left is enormous, but whatever little was done helped, no doubt, to improve the position of the agriculturist. One of the main reasons for the greater success attending the efforts of Government in the introduction of improvements was that the co-operation of the local landholding classes was invited and was obtained in this cause. In many cases this proved the most useful agency, and in the Central Provinces and in some parts of the Bombay Presidency local communities of landowners were formed which worked in conjunction with the Agricultural Departments.[6]

The poverty of the peasant has been perhaps the most formidable obstacle to the introduction of agricultural improvement in India. His chronic indebtedness is the most important factor contributing towards this poverty. Credit plays, perhaps, as important a part in the agricultural economy of India as water. The fact is patent that until recently no attempts whatever had been made to organize rural credit in India. Mr Justice Ranade emphasized, rightly, this want of organized credit as the greatest handicap to the agriculturist and to rural industry.[7] There was very little hope, indeed, of any progressive improvement in Indian agriculture if the exorbitant rates charged by the local moneylender had to be paid by the cultivator on every bit of capital that he put into his land. This fact had been long realized and the 'sowcar' had been the *bête noire* of all writers on Indian economic conditions. But after all the

[5] See evidence of Sir Frederick Nicholson and Mr Govindan: *Indian Industrial Commission*, Minutes of Evidence, vol. III (1916-18).

[6] *Reports on the Introduction of Improvements in Indian Agriculture by the Work of the Agricultural Departments*, 1909, 1910, 1912 and 1914. For Agricultural Associations see the 1912 *Report*, pp. 11-15.

[7] Ranade, *Essay on Reorganization of Rural Credit in India* in *Essays on Indian Economics* (1898).

moneylender had been fulfilling a very important function in the carrying on of agricultural operations in India and it was no use ousting him or abusing him if there was nothing better to take his place. The fact that the moneylender and his exactions are not an element peculiar to Indian agriculture has been already emphasized by many writers. And as Sir F. Nicholson put it, 'the substitution of organized credit for that of the moneylender is a necessary development of civilization. It is *not* merely cheap and facile credit that is required.'[8] Attention was early directed to the land banks and the co-operative credit societies of Europe which had been chiefly instrumental there in ousting the local moneylender. The first important step in this direction was taken when the Madras Government appointed Mr (afterwards Sir Frederick) Nicholson to investigate the problem. His report was very thorough but no immediate action was taken on it. In the meantime individual officers in certain districts had been taking an interest in the matter. Mr Dupernex of the North-West Provinces[9] had started certain experimental village banks in that province. At about the same time similar societies had been started in the Multan district of the Punjab by Mr Maclagan and Captain Crossthwaite.[1] There was no lack of interest shown by the local agriculturists in these societies and Government was induced to appoint a small committee to inquire into the establishment of co-operative credit societies in India. This committee in its report laid down the general lines on which, in its opinion, these societies should be constituted in India. The first Co-operative Societies Act was passed in 1904 and the first step of Government was the appointment of Provincial Registrars for each province to further the work of co-operation. Unfortunately, the first Act was very limited in its scope. It restricted the function of these societies to supplying funds to their members and a good many of its

[8] *Report on the Possibility of Introducing Land Banks*, etc., *in Madras Presidency*, vol. I, p. 42.

[9] The name was changed to that of the United Provinces of Agra and Oudh in 1900. As far as possible the names have been used having regard to the period in which mention has been made of them.

[1] *Report of the Committee on the Establishment of Co-operative Credit Societies in India* (1901). Evidence of Mr Maclagan, etc.

provisions as interpreted by the courts became a hindrance to the further spread of the movement.[2] The Act was therefore superseded by a new one passed in 1912 which removed those old restrictions. Quite a number of supply and sale societies immediately came into existence. These supply and sale societies were also greatly instrumental in the spread of agricultural improvements in India. It will be clear that the movement was hardly a decade old in 1914. Considering this short period the progress made in the movement was quite satisfactory. In 1913-14 the position was:

Number of societies	Number of members	Loans issued to members and other societies
14,881	695,998	Rs. 5,04,17,310

Almost all these societies were agricultural societies and also mostly credit societies.

Agricultural Statistics of British India

	THOUSAND ACRES				
	1894–5	1901–2	1906–7	1912–13	1913–14
Fallow land ...	30,183	42,147	39,935	48,760	52,620
Net area cropped ...	196,601	199,708	214,226	224,166	219,192
Irrigated area ...	23,825	32,582	36,654	45,539	46,836
Rice ...	69,280	70,067	73,541	78,752	76,908
Wheat ...	22,761	18,607	25,137	23,861	22,685
Jawar ...	20,863	21,819	20,781	20,968	21,405
Bajra ...	11,337	13,197	15,034	16,269	15,385
Total food-grains ...	181,576	176,999	195,117	201,373	191,573
Sugar ...	2,889	2,596	2,624	2,712	2,708
Oil-seeds ...	13,930	11,968	13,965	14,936	14,658
Cotton ...	9,717	10,299	13,771	14,138	15,844
Jute ...	2,275	2,278	3,523	3,324	3,136
Fodder crops ...	1,931	2,944	4,548	5,770	5,910
Indigo ...	1,705	792	449	227	169
Tea ...	414	495	505	558	512

[2] H. W. Wolff, *Co-operation in India,* chaps. ii and iii.

CHAPTER VIII

Industrial Progress, 1895-1914

THE industries which had been progressing in 1895 suffered a considerable check during the years 1895-1900. Industries in India, especially those which depend for their market on the demand in the country itself, are bound to suffer with a collapse of agriculture. Such a sympathetic collapse of industries was a prominent feature of the old Indian economic structure, and even in modern India the artisan industries are in the same condition as they were in the old days. Of the bigger industries coal was the least affected by agricultural distress in India and jute also not very greatly.[1] The cotton industry on the other hand was in a different position. Its market for woven goods was chiefly Indian and also a large portion of the yarn produced in the mills went to satisfy the demand of the Indian handloom weaver. The Indian handloom weaver in his turn supplied the coarse cloth, chiefly to the peasant. Now, it is a well-known fact that in times of depression the first economy that the Indian peasant effected was in the matter of his clothing and thus the country weaver, with the agricultural labourer, was the first to arrive on the relief works. Hence the market for mill-made yarn shrank rapidly in any period of agricultural depression. We need not, therefore, be surprised to find that during the period of the two terrible famines (1895-1900), the cotton industry also suffered a very severe trade depression. The famines, with the attendant depression of the handloom weaver, contributed largely towards this depression of the cotton industry, but there were also other causes at work during the period which were quite as important in bringing about this result.

In 1896 appeared in India, for the first time in a virulent

[1] The jute industry was also affected in its Indian demand. For the reduction in the exports of food-grains and other raw products affected the demand for gunny bags.

form, that epidemic which has been working havoc ever since with the population. This scourge, the bubonic plague, appeared first in that year in Bombay. It may have been known in India before, but never in such a terrible form. The result was that the population of Bombay, frightened at this strange and terrible visitation, left the city in large numbers. There was a wholesale exodus; and with the rest the labour force of the cotton industry left the city. This was the first blow. After a year or two the people became accustomed to the epidemic, and though it did not abate in its intensity, the labour force was not so sensitive to its visitations as to its first appearance. After the first famine came the plague and after the plague the second famine. But this was not all. Two other factors appeared just afterwards. In 1902 there was the great American speculation in cotton; this sent up the price of cotton to extraordinary heights. The mill and the handloom industry both suffered. The high price of cotton made the production of manufactured goods, especially the coarser goods, on which chiefly the Indian industry depended, highly unprofitable. The other factor was a disturbance in India's chief foreign market, viz., China. The bulk of India's foreign exports of yarn went to China and a depression in that market meant a great blow to the spinning industry. Thus this period of depression lasted from 1896—with slight periods of recovery —up to nearly 1905. But in spite of this prevailing depression the rate of growth in the industry was more or less uninterrupted.

Cotton Industry, 1895-1914

	1895–6	1900–1	1904–5	1907–8	1907–14
No. of cotton mills	150	194	206	227	264
Persons employed ...	146,552	156,355	196,369	225,367	260,847
No. of looms ...	37,278	40,542	47,305	66,718	96,688
No. of spindles ...	3,852,611	4,942,290	5,196,432	5,763,710	6,620,576

This table shows that there was a pretty rapid growth in the industry during these years of depression. It will be

observed from the figures that during the same period the number of spindles had begun again to rise in a greater proportion than the number of looms; and that most of the rise in the number of spindles came about during the years 1895-6 to 1900-1. Indeed, this feverish growth in the number of spindles largely contributed to the over-stocking in subsequent years of the China market and the falling-off in the demand from that quarter.

About 1905 the depression lifted. Agricultural prosperity in a small measure had returned, the plague had ceased to frighten people away from industrial centres, the price of raw cotton had resumed its normal level and China was bare of stocks. Therefore in the next two or three years the Bombay industry enjoyed unprecedented prosperity. The boom was especially pronounced in the yarn industry and the spinning mills paid fabulous dividends. The demand for the yarns was so great and the price so remunerative that the mills were kept working for as long a day as was, in the circumstances, possible, and the newly introduced electric light made possible a very long day. There was feverish production and the China market was soon overstocked again. With this, in 1907, came also the general world trade depression. Short time had to be run everywhere, especially in the yarn mills. The progress was continued well after this depression and in 1914 the cotton industry was a growing and a fairly prosperous industry.

Apart from the ordinary progress two tendencies may be noticed in the recent history of the industry. There were (i) the continuance—very marked since the beginning of the century—of the more rapid growth in the number of looms as compared with the number of spindles and (ii) the tendency of the cotton manufacturers to turn out a finer class of goods. The first of these tendencies will be easily seen from the table. The reason for this growth of the weaving industry is not far to seek. It is to be found in the violent fluctuations of the last twenty years. The yarn market for the Bombay industry was mainly the China and the home market. For its exports depended almost entirely on the China market. Here it had to face the competition of Japan and Lancashire. Depending thus for its export almost

entirely on one market, which again was not particularly stable, the fluctuations in the fortunes of the yarn industry were naturally violent. As regards the home demand, this also varied with the fortunes of the agriculturist. The Bombay industry was, therefore, always trying to find new markets for its yarn products, but in this it had not been particularly successful. Mr Graham Clarke gives another reason for this tendency of the mills to add looms in a large proportion. He says that 'the cloth market, being farther removed from the raw material, is a more stable market than the yarn market. At times the yarn mills make much larger profits than ever fall to the lot of the weave mills, but when the reaction comes the yarn mills usually feel it first. Thus in 1905 and part of 1906 yarn mills simply coined money, while the weave mills only made moderate profit. At this time (April 1907) the yarn mills are running short time while the weave mills are making the same profits as before.'[2] Considering this it was natural that the industry should now turn to the stabler weaving markets. The market for woven goods was very largely the home market, only about one-sixth to one-seventh of the total production being exported. (In the case of yarn the proportion of exports came up to more than a third, but this proportion was a slightly diminishing one.) These exports went chiefly to Arabia, Persia, East Africa and the Straits. Now the home market for mill-woven goods, not being dependent on the poorest classes, was much more stable than the market for the products of the handloom. Thus there were no phenomenal profits to be reaped in this branch of the business but the prosperity of the industry was more stable. The other tendency, that of the production of finer counts of yarn, was due to the same causes. In the initial stages of the growth of the cotton industry, when the market was very large and the extent of the industry very small, the flow was naturally in the direction in which dividends were most easily earned. In the early days, the well-nigh universal system of paying the agent on the output of the mill, without any relation to profit and loss accounts, told also in favour of the very general production of coarse yarns and only the

[2] Graham Clarke, *Cotton Fabrics*, p. 13.

inferior kinds of piece-goods; and once the machinery was installed for the production of these coarse goods it was difficult and uneconomical to produce the finer qualities on it. But since 1890 the expansion of the foreign market for coarse yarns had been very slow; the home market had also been completely captured by about 1900, and the competition in the industry had become keen. The industrialist had, therefore, to turn his attention to newer and more profitable fields.[3] In spinning, the best new market available was the home market for finer yarns, which as yet was completely dominated by Lancashire. The larger growth of looms was also prompted by this desire to find new markets for the industry. In this connexion it should be noticed that the quantities of twist and yarn exported from India were almost stationary from the nineties onwards while the quantity of piece-goods had slightly diminished. Thus with stationary or contracting foreign markets the growing industry had to turn its attention more and more to the home market and here the production of finer yarns and piece-goods was the most promising field.

The growth of the jute industry in India at this time was unmarked by any special feature except its rapidity.

Jute Industry, 1895-1914

	1895–6	1901–2	1907–8	1913–14
No. of mills	28	36	54	64
Persons employed	78,114	114,795	187,771	216,288
Looms	10,169	16,119	27,244	36,050
Spindles	214,679	331,382	562,274	744,289

The old tendency for the number of mills to increase in a much smaller proportion than the number of hands, looms and spindles is still marked, but not to so great an extent.

[3] See article by Mr (later Sir) D. E. Wacha, pleading for a movement of the industry towards the production of finer goods, in *Industrial Quarterly Review of Western India*, vol. I, no. iii (1892).

Here another interesting feature is that the number of looms and spindles has increased in a much greater ratio than the number of hands employed. This very possibly shows economy of labour, by the introduction of better machinery or on account of the management being on a larger scale than before. The growth of the industry was not so rapid during 1895-1900 on account of the prevailing famines; though these did not directly affect the industry, they did so indirectly by stopping the export of the food-grains and other raw agricultural produce out of India and thus diminishing the Indian demand for gunny bags. The industry also suffered a few periods of depression, such as the one in 1905-6. The growth of the jute mills took place mostly round Calcutta, and the extent of the industry outside this area was insignificant. The Bengal industry possessed a great advantage in being near the source of the supply of raw jute; for Bengal had a monopoly of jute. During this decade, however, competition was growing abroad, especially in Germany and the United States. The Continental and American industries were generally encouraged by their national Governments by a tariff on foreign jute products, while raw jute was allowed in free. But this did not interfere with the growth of the Indian industry, and side by side with a large increase in the exports of raw jute the exports of jute manufactures were also increasing rapidly.

The production of minerals in India made rapid strides during the period 1895-1914. The old industry of coal-mining made very rapid progress and two practically new industries—petroleum and manganese—attained great importance during this period. Some idea of this great general increase can be had from the following table:

Total Annual Value of Rupees (quinquennial averages) of Mineral Production in India

1898–1903	1904–8	1909–13
Rs. 6,49,48,905	10,07,44,875	12,58,98,330

The record of the coal-mining industry is one of almost uninterrupted progress. It progressed by leaps and bounds and outran the hopes of the most confirmed optimist. The average production of coal for the years 1891-5 had been 2,460,000 tons, while the average production during 1896-1900 was 4,228,000 tons. Enormous progress was achieved in these five years and, what is more, the rate of progress was well kept up in the years which followed. That the coal industry did not suffer on account of famines is due to the fact that its chief customers were the railways and the jute and other Bengal industries. Railways, far from suffering from famines, were then busier than ever.

Coal Industry, 1900-14

	1901	1906	1911	1914
Total output, tons ...	6,038,053	9,112,663	19,051,835	15,738,153
Persons employed ...	.....	99,138	116,153	151,376

The progress was not due at all to the discovery of any new coal-fields but to the increased exploitation of the well-known Bengal coal-fields.[4] These coal-fields together in 1906 produced 95 per cent of the total Indian production of coal.[5] The history of the industry during this period was not continuous. Its rate of growth was, indeed, rapid throughout, and, generally speaking, uniform, but if we consider it in relation to the growth of the railways and the coal-mining industry in India, then the history seems to fall into two distinct periods; the first from 1895 to about 1908 and the second from 1908 to 1914. The first period was marked by two distinct tendencies: (i) the growing excess of the exports of Indian coal over the imports and (ii) the diminishing share taken by the railways of the total produce. At the same time the imports of coal into India were also steadily diminishing. In this period Indian coal more or less cap-

[4] These, after the reorganization of provinces in 1911, formed a part of the newly created province of Bihar and Orissa.

[5] Sir T. Holland, *A Sketch of the Mineral Resources of India* (1908).

tured the demand of the railways completely. The Indian railways had since 1902 almost given up using foreign coal. From this date onwards, of the total coal used on Indian railways, 99 per cent was Indian. As to the proportion of the total coal output of India used on Indian railways, in 1895 about 38 per cent of the total was taken by the railways; in 1906 this had fallen to 30 per cent and it continued to diminish further for some time. Both these tendencies showed that the coal production of India was increasing at a slightly more rapid rate than the railways and the coal-consuming industries. But these features were absent in the years after 1908. The exports of Indian coal diminished slightly; this was attributed partly to the large quantities of inferior coal sent out of India during the boom of 1908, but it could not have been entirely due to that reason. As for the imports, 'between 1881 and 1895 the imports of coal into India were almost stationary. From the latter year a steady decrease set in until 1909 when the minimum was reached. In 1909 largely owing to the high price of coal during 1908 the quantity increased.'[6] But the quantity continued slightly to increase even after this year. The exports still exceeded the imports but the margin between the two was materially diminished. The percentage of Indian coal in the total annual consumption on Indian railways fell to 95 per cent from the 99 per cent of the latter years of the previous period, and this in spite of the fact that the railways were now consuming a greater proportion of the total output of Indian coal than they did before. 'The Indian coal consumed on railways has formed over 31 per cent of the total production during the period under review (1909-13), this being higher than the figure for the previous period 1904-8, and indicating that railway expansion has, if anything, outstripped the coal consuming enterprises.'[7] But the facts not only showed that the railways had outstripped the coal consuming enterprises but also that the railways and the coal consuming enterprises together were growing at a faster pace than the production of coal in India. It must be noticed here that Indian coal was

[6] V. Ball, *The Coal-fields of India*, revised by R. R. Simpson, chap. iii (1913).

[7] *The Quinquennial Review of the Mineral Production of India* (1909-13), p. 17.

handicapped by two facts in its competition with foreign coal. In the first place, it was not of the high quality required for certain industrial purposes and, secondly, the high railway freights made competition very difficult in parts of India distant from the coal-fields. Thus there was very little difference in price—especially when the difference in quality was also considered—between Bengal and Welsh coal, in a western port like Karachi.

The causes helping the growth of the coal industry were the growth of communications and the growth of the factory industry. The large growth of output was due largely to the fact that improved machinery was widely coming into use throughout the industry; still in many of the smaller mines very little machinery was used. The growth was also helped considerably by the change made in the conditions of the grant of mining leases and licences. The old rules regarding these were undoubtedly irksome and imposed unnecessary restrictions on the capitalists. The figures for the concessions granted before and after the change of rules are instructive. These were in 1899 only 60, but rose in 1904 to 189, in 1906 to 252 and in 1907 to 400.[8]

The growth in the exploitation of the petroleum deposits of Burma was almost as rapid as in that of coal. The extraction of crude oil by rather primitive methods had been going on in these fields of Upper Burma for a very long time. Very little machinery was used and the fields were controlled by a very closely formed guild-like organization.[9] Up to 1887 exploitation by modern methods had not been tried in this industry at all. In that year two companies were started to exploit the oil, equipped with modern drilling machinery. The beginnings were modest and in 1890 their production amounted only to 1,516,975 gallons. The Upper Burma deposits were the only important ones and produced over 95 per cent of the total Indian supply. The production did not increase greatly for nearly a decade and it was not till 1896 that the hopes of finding an important supply began to be entertained.[1] The growth in production,

[8] Sir T. Holland, op cit.
[9] Dr F. Noetling, *Petroleum Industry in Upper Burma* (1892).
[1] E. H. Pascoe, *The Oilfields of Burma* (1912).

however, was rapid after 1896. Even all this growth was not able to supply completely the needs of India and the imports kept on increasing steadily. The exports also of Burma oil were not at all considerable.

Petroleum Industry

	1896	1900	1905	1910	1914
Gallons oil ...	15,049,289	37,729,211	144,798,444	214,829,647	259,342,710

The next important mineral industry of India is the manganese industry. This may be said to be the creation almost entirely of the twentieth century. For though manganese mining had begun in the Madras Presidency as far back as 1892, the production was still very small at the end of the nineteenth century; and the important deposits in the Central Provinces were not worked till 1900. At the very beginning, a strong impetus was given to the industry by the outbreak of the Russo-Japanese War, for this reduced considerably the supplies from Russia which were hitherto the most considerable of the world supplies; the rapid growth was also due to the great activity at this time in the steel trade in Europe and the United States.[2] The rise was rapid and the production reached its highest point in 1907, when it exceeded 900,000 tons; and for a short time, from 1908-11, India held the position of the largest manganese producing country in the world. Following the depression in the steel trade in 1908 there was a depression in the industry. It recovered for a short time when there was another interruption in the Russian supplies. Manganese was raised in India entirely for export in the absence of a local steel industry. The industry employed in 1913 about 20,500 persons.

The gold industry of India was considerably older than the two above mentioned. The only important gold-field in

[2] A. H. Curtis, *Manganese Ores*, p. 34 (1919). See also Holland and Fermor, *Quinquennial Review of the Mineral Production of India* (1904-8), pp. 128-9.

India is the Kolar field in Mysore. Attention was directed towards this field by the old Indian workings and about 1880 many companies were floated for the exploitation of gold in India. The expectations were very great in the beginning but they were doomed to be disappointed. 'All the companies floated with such extravagant hopes were moribund in 1885, and it was only a dying effort of the Mysore Company in that year that disclosed the richness of the reef. . . . By 1887 the adjacent companies had resumed operations and from that time till 1905 the history of the field was one of uninterrupted progress and success.'[3] Since the latter date there has been a fall in the output owing to zones of lower grade having been reached. Till 1902 gold was the most important in value of the Indian mineral products; after 1902 its place was taken by coal.

The other important mineral industries of India are the production of salt, mica and saltpetre. The first is a very important industry. The supplies are drawn from different sources such as sea, rock and lake. The Indian production is, however, not able to meet entirely the home demand. As regards mica India is the chief producer in the world. The industry, though not very important, employed nearly 18,000 people in 1913. Saltpetre, of which India had a practical monopoly, was at one time an essential ingredient of all high explosives but since the discovery of substitutes for it (about 1860) the industry has been in a stationary condition.

As regards the iron deposits of India, which exist in abundance, the only successful attempt to manufacture iron had been at the Barakar works on the Raniganj fields.[4] Other attempts had been numerous but all had failed.[5] During the first decade of this century Tata & Sons floated their company to produce iron and steel in India. They began working in 1911 but naturally their production by 1914 was not large.[6]

There had been, on the whole, a remarkable growth in the mineral production of India during this period. But

[3] *Quinquennial Review of the Mineral Production of India* (1909-13), p. 85.
[4] E. R. Watson, Monograph, *Iron and Steel*, Bengal (1907).
[5] Ranade, *Essays on Indian Economics* (1898).
[6] Lovat Fraser, *Iron and Steel in India* (1919).

compared with the needs of India it was yet insignificant. This is shown by the fact that the total value of minerals and mineral products imported into India far exceeded the total value of those produced in the country. Not only was the development insufficient, but it was also one-sided. The six important mineral products of India were coal, petroleum, gold, salt, manganese ore and mica. Of these the first four are consumed by what have been called by Sir T. Holland the 'direct processes', and the last two were mined purely for export. There was an almost entire lack in India of the mining of metalliferous minerals. 'The principal reason for the neglect of metalliferous minerals is the fact that in modern metallurgical or chemical developments the by-product has come to be a serious and an indispensable item in the source of profit, and the failure to utilize by-products necessarily involves neglect of the minerals that will not pay to work for the metals alone. . . . A country like India must be content, therefore, to pay the tax of imports until industries arise demanding a sufficient number of chemical products to complete an economic cycle, for chemical and metallurgical industries are essentially gregarious in their habits.'[7] It was by a skilful utilization of all the products, then, that European industry had been able completely to vanquish the very old established metal and chemical industries of India; and as pointed out in the above extract the revival of these industries depended on the general movement towards development of industries in India.

After the large industries and the general production of minerals we may now consider another group of industries, i.e. the plantations. The history of all these, with the exception of the tea industry, is very chequered. The oldest of these industries, viz. indigo, had been almost stationary from 1860 to 1895. The efforts of German scientists had been directed for a very long time towards the preparation of synthetic indigo; some of these attempts had been successful, but it was not until 1897 that the first commercially

[7] Holland and Fermor, op. cit., p. 10. See also Sir T. Holland, paper on the 'Mineral Development of India' read before the First Indian Industrial Conference (1905).

manufactured indigo was placed on the market. The scare was enough to discourage planting over large tracts;[8] the two seasons just after 1897 happened also to be very unfavourable. Thus from 1897 dates the progressive decline of the indigo industry of India. The area under indigo began rapidly to diminish and the exports began to fall off. For though at first the amount of synthetically produced indigo was not large, it began rapidly to increase and was able to cut prices very low in its competition with natural indigo. The planters tried to strengthen their position partly by cultivating other crops and partly by attempting improvements in the methods of the cultivation and manufacture of indigo. But the decline in the industry could not be checked. The figures for the exports of indigo show how rapid this decline was. (These are a good index because almost all the indigo manufactured in India was exported; only a small quantity and that of very inferior quality was retained in the country.) The exports were in 1895-6, 166,308 cwt. and in 1913-14, 10,939 cwt.

The coffee industry had a brief period of prosperity from 1889 to 1896. But in 1896 Brazil, by then comparatively free from its political troubles, again began its production in full and prices resumed their decline. Since that year the area under coffee has been steadily diminishing. At the same time the exports do not show the decline in any marked degree. The annual note on coffee (1909-10) has the following: 'While the area under coffee has been steadily diminishing since the season 1896-7, production as judged from exports, which account for the greater part of the crop, has fluctuated from year to year, a small crop alternating with a large one.' The exports were on the whole steady, showing only a slight downward trend. The area under the crop had on the other hand definitely decreased from 260,887 acres in 1900-1 to 203,677 in 1913-14.[9]

[8] C. Rowson, 'Cultivation, etc. of Indigo', *Journal of the Royal Society of Arts* (1900).

[9] The indexes used above to measure the extent and progress of the indigo and coffee industry have been the area under cultivation and the figures for exports. The actual returns of factories and the persons employed would have been obviously a better index. The entire lack of such statistics makes this impossible. Government had been, indeed, publishing statistics

The tea industry, on the other hand, had been making steady progress throughout. In the world market for indigo, synthetic indigo had become the dominant factor in the twentieth century, in the coffee market Brazilian coffee had been controlling the market from an even earlier period, but in the tea market Indian tea had been improving its position and was now by far the most important factor. The growth of this industry had been made possible by the India tea steadily driving China tea out of the United Kingdom market. The change, indeed, was very complete. In 1866, of the total imports of tea into the United Kingdom only 4 per cent were Indian and the rest Chinese; while in 1903 of the total imports, 59 per cent were Indian, 31 per cent from Ceylon and only 10 per cent from China. The increase in the tea area, which had been remarkable till 1895, continued. The greatest increases took place in 1897 and 1898. In the next two years the rate of increase was sharply checked and almost stopped in 1902. The production had also been increasing rapidly and the result of this huge increase in production had been a rapid reduction in the prices of tea after 1895. For a time also, the United Kingdom demand

of 'Large Industries' for a number of years. But they are unreliable and for purposes of comparison over a series of years entirely untrustworthy. The following extract from the 11th issue of *The Financial and the Commercial Statistics of India* will illustrate the difficulties. 'The statistics are incomplete even as regards large industries which ought to find a place in the tables and the figures given are sometimes of doubtful accuracy. . . . From 1901 no return has been made for any factory or establishment which employs an average of less than 25 persons throughout the year, and from 1902 the returns from Bombay Presidency exclude all establishments with an average of less than 50 persons. . . . The tabulated returns from 1901 are, therefore, not comparable with the figures for previous years, published in an earlier edition of this volume, *when each reporting officer exercised his own discretion as to what constituted a large industry*.' [Italics are mine.] Later on the basis for the collection of the statistics was made 50 persons or over, all over India. But even so we read a special remark against the statistics of the indigo industry. 'The table must be taken more as an indication of the extent of the industry than as a complete record.' As regards coffee, the Director-General of Statistics, Dr O'Connor says, 'It is difficult, however, to ascertain with accuracy the area, yield or condition of the coffee estates of southern India, the planters being averse, for some unknown and unconjecturable reason, to communicate statistical information relating to the industry' (*Review of the Trade in India, 1901-2*, p. 21). The foreign trade statistics of India, on the other hand, are the most reliable and the agricultural statistics are somewhat better than those for large industries.

was stationary. The result was a decrease in area between 1902 and 1906, and a depression in the industry. After 1906 progress was again resumed. The United Kingdom market began steadily to expand and an important and growing market had been found in Russia.

The plantations, as a whole, were now taking a smaller proportionate share in Indian industry. They were in a somewhat different position from the other industries. They were almost wholly European-owned. They were exempted from the ordinary labour laws of the country and the planter had greater control over his labour force than the ordinary industrialist. These industries were partly agricultural and partly industrial, and all of them exported the greater proportion of their product. The tea and coffee industries opened up hitherto waste tracts, and their chief importance in the industrial progress of India lay in providing an occupation for a great number of labourers from the congested parts of the country.

The sugar industry of India was another of those industries which had a bad time in the nineties. One of the remarkable features of the foreign trade during the decade 1890-1900 was the enormous rise in sugar imports. The imports had been rising steadily for some time before this. They came, then, chiefly from Mauritius and Java. The Indian industry did not suffer at this time. It was only when the beet-sugar imports began to come in, especially after a protective tariff had been placed on them in America, that the real blow was struck at the Indian industry. Beet-sugar forced prices down extremely low and sugar refining in Indian factories became unprofitable.[1] The chief seat of this industry was the United Provinces and some districts of Bengal. Between 1895 and 1900 over 180 of these small refineries in the United Provinces had to close down and there were many closures in the Bengal districts, e.g. in Jessore.[2] A countervailing duty on these bounty-fed beet-sugars was imposed but this did not help the industry greatly.

1 S. M. Hadi, *The Sugar Industry of the North-West Provinces and Oudh* (1899).

2 *East India (Sugar) Countervailing Duties Act*. Correspondence, etc. (1901) [Parliamentary Paper].

It had been contended that the fall in the price of sugar would have no effect on the area under sugarcane or the price of *gur*.[3] This expectation, however, was falsified and the area began to shrink. This shrinkage was chiefly due to the fact that, there being a general rise of prices, the cultivation of food-grains, cotton and other crops had become very remunerative. Sugar did not share to the same extent in the general rise of prices on account of foreign competition. Thus sugarcane cultivation was being abandoned in favour of other more paying crops.[4] Though the competition of beet-sugar first started the decline, it cannot be said that but for this the industry would have prospered. The very basis on which the industry rested was unstable. The unit of production was very small, the methods employed crude and wasteful. There was almost no machinery used in most of these concerns and the very fact that the sugar was manufactured from *gur* and not directly from cane-juice told heavily against the industry. One of the contributing causes of this decline was the refusal of Government to give permission to extract rum from the molasses. The system of cultivation in India also was one of the obstructions to the revival of the industry.

Almost the same fate overtook the leather tanning industry of Madras; and from 1899 Madras, whence exports of raw hides and skins had been insignificant hitherto, began to export them in increasing quantities. The decline was due to the discovery in America of the chrome processes of tanning. This, together with the application of machinery on a very large scale in the boot and shoe industries, created an enormous demand for raw hides and skins in the west. The prices rose very high and the tanner found it impossible to carry on his business profitably. There was another way in which the discovery of chrome-tanning processes affected Indian tanning. Before these processes were introduced, there was a large demand in foreign countries—especially in England—for the vegetable and bark-tanned Madras hides, but before using them the leather manufacturer abroad had to re-tan them. It was impossible to treat

[3] Memorandum by Mr Mollison, ibid.
[4] F. Noel Paton, *Sugar in India* (1911).

an already vegetable or bark-tanned hide by the chrome processes; this meant a serious diminution in the market for Indian tanned hides and skins.[5] Another adverse influence was the finding of the Committee appointed by the Royal Society of Arts that Indian tanned leather was unsuitable for the purposes of book-binding. Attempts had been made at this time to introduce the chrome processes in Indian tanning but they were mostly unsuccessful. There was during this decade, however, a small growth of the large-scale tanning industry in the Bombay and Madras Presidencies—especially in the former. The two big centres were Bombay and Ahmedabad. The industry was on a much larger scale than the now decaying Madras industry and the unit might more properly be called a factory than a workshop. At the same time the methods used in the industry, except in a very few tanneries, were still crude.[6] The extent of this industry was, on the whole, small.

During these twenty years a considerable increase had taken place in that section of the industry which comprises the cotton gins and presses, the rice and timber mills, etc. Rice mills, which had been hitherto more or less confined to Burma, spread into India proper, notably in the Madras and the Bengal Presidencies. Engineering and railway workshops, iron and brass foundries also grew. The growth in this class was due very largely to the extension of railways in India and to the introduction and extended use of cycles, motor-cars, tramways, etc. They also indicate a somewhat larger use than before of small machinery in ordinary operations, such as small pumps for lifting water, the introduction of small motors in workshop industries, where mechanical power had not been used before, and also the establishment of small flour or oil mills, etc., in many parts of India.

It is indeed in this direction of a slow spread of the use of improved machinery in various operations, the introduction of small motors where no power was used before, and the establishment of small local and isolated factories in

[5] Chatterton, *Leather* (Madras), and other provincial monographs.
[6] A. Guthrie, Monograph, *The Leather Industry* (Bombay, 1910).

industries in which no very complicated processes were required, that the real industrial progress, whatever its extent, took place in India during this period.

An examination of the results of the industrial census of India taken in 1911 will prove the truth of this statement, as well as help to bring out the extremely small extent of modern industry in India. The definition of a factory was taken to be any industrial establishment employing on an average more than 20 hands. In all, 7,113 factories were counted in the census. Of these, 4,569, i.e., a little less than two-thirds, used mechanical power in some form or other, while the rest did not make use of any mechanical power in their industrial processes. The total number employed in this industry amounted only to 2,105,824.[7] The industry was not only small, but its character also was very limited. Among the sixteen groups into which the industry was divided by the Census Commissioner the number employed exceeded 100,000 only in four groups. These were:

	Persons employed
(i) Growing of special products, i.e. plantations, etc	810,407
(ii) Textiles	557,589
(iii) Mines	224,087
(iv) Industries connected with transport ...	125,117
Total	1,717,200

These four groups between them contain over 81 per cent of India's industrial population. But the groups are comprehensive and the idea conveyed is that of a rather varied industry. The correct impression will be conveyed by the enumeration of individual industries which employed, say, more than 20,000 people.

[7] The population of India in 1911 was about 315 millions.

Industrial Census, 1911

Industry	Persons employed	Industry	Persons employed
Tea plantations	703,585	Brick and the factories	46,156
Cotton	557,589	Flour and rice mills	42,374
Jute, hemp, etc.	222,319	Printing presses	41,598
Collieries	142,977	Indigo plantations	30,795
Railway workshops	98,723	Gold-mines	28,592
Coffee plantations	57,623	Machinery and Engineering workshops	23,147

After these follow saw mills, stone and marble quarries, timber yards, iron foundries and petroleum refineries. These made up the whole class of industries employing more than 10,000 persons. It is easy to see that the first four were the only industries at all important. On the plantations, a large proportion of the persons employed were engaged in purely agricultural work. The one-sided nature of the development of mineral industries has already been explained. Thus of the factory industry proper—i.e. apart from mineral industry—there remain, after cotton and jute, only the accessory industries, i.e. workshops, foundries, etc., and the class of gins, presses and rice and timber mills. Indeed these latter two classes, if we also added to them the class of flour, oil mills, etc., were, after the large textile industry, the only considerable modern industries in India. The extent of industries in India at this time was extremely limited and it should be noticed that industries in which complicated processes were required are markedly absent.

Turning now to the condition of labour in Indian factories, we find that the Factory Act of 1892 remained in operation till 1912. When the Act was passed in 1892, general satisfaction had been expressed as regards its provisions. Nearly a decade after the passing of the Act a factor was introduced into the hours of labour which could not then have been taken into account. This was the introduction of

electric light into the factories. Its first introduction into the Bombay industry coincided with a big boom in the yarn market. This made the working of the mill for excessively long hours profitable, and it had been made possible by the introduction of electric light. The Committee of 1891 had considered the sunrise to sunset hours as normal in India and thought them to be not excessive. But these calculations were now upset. The hours worked in the Bombay industry during the 1905 boom were extremely long, sometimes lasting from 5 a.m. to 9 p.m.; and on an average a 14½-hour day was worked in the industry during this period.[8] Attention was attracted towards these excessive hours by articles in the press, and Government appointed a Committee to inquire into the condition of textile factories labour; the report of this Committee pointed to the necessity of a more detailed and a wider inquiry. Another Commission was accordingly appointed to consider the whole question of factory labour, and presented its report in 1908. One of the most interesting facts brought to light in this report was that in many cases the provisions of the Act of 1892 were openly disregarded. In the cotton mills of the United Provinces, south Madras, Bengal and the Punjab children worked the same number of hours as adults; also quite a number of children under 9 years of age were employed in the factories as half-timers. In this connexion, 'one manager of a mill (Calcutta jute mill) stated that he did not send the children to the doctor to be certified prior to employment as he had a shrewd suspicion that most of them would probably be rejected; while he frankly admitted that the mills made no change whatever in their system consequent on the amendment of the factory law in 1891'.[9] The Khandesh gins, which had been brought under the law in 1891, were a good deal better now; but in the smaller gins and rice mills in other places the hours were still very excessive. Thus in the Gujerat gins, not under the Act, 15 to 18 hours a day were sometimes worked. These factories, as they depended entirely on the supplies of rice and cotton, worked spasmodically; the pressure during the rush season being very

[8] *Report of the Textile Factories Labour Committee* (1907).
[9] *Report of the Indian Factory Labour Commission* (1908), p. 17.

great and consequently the hours excessive. The hours of adult male labour were the worst in the smaller up-country centres. These hours were mostly to be found in the cotton industry. The north India centres, namely, Agra, Delhi and Cawnpore, were specially bad. The average hours worked were over $13\frac{1}{2}$. In the Calcutta jute industry the hours were not excessive, except for the weavers who sometimes worked a 15-hour day; the hours of children were excessive everywhere and the physique of the factory children compared unfavourably with those outside. But the point most keenly discussed at this time was the regulation of the hours of adult males. The majority of the Commissioners, though they did not recommend a legal regulation on this point, found that the labourers suffered from these excessive hours; and they provided for a regulation of the hours of women and children which, in their opinion, would automatically reduce the hours of men. Dr Nair differed from them on this point. A large portion of the evidence showed the advisability of short hours. The excessive hours were defended, chiefly, on the score of the 'ingrained habit' of the Indian worker to loiter during working hours. The evidence showed, however, that the habit was itself a necessary corollary of excessive hours. In this connexion a most interesting experiment was carried out by the Cawnpore Elgin Mills. These mills, at one time, worked a 15-hour day, but they found it uneconomical and wasteful. So they brought the hours gradually down to 12 and found that the gross outturn was not diminished, that the men still earned the same pay and that the work was better done.[1] A similar experiment was carried out in the Buckingham Mills in Madras, where the experience of the manager was that 'while they had reduced the working day by three-quarters of an hour (i.e. from $12\frac{1}{2}$ to $11\frac{3}{4}$) there had been no decrease in the total production'. He attributed this to better machinery, better supervision, and increased application of the operatives.[2] Evidence to the same effect was given by Mr (later

[1] *Factory Labour Commission*: Minutes of Evidence. Evidence of Mr Bevis of the Elgin Mills.

[2] ibid. Evidence of Mr Alexander. The factor of better machinery somewhat vitiates the value of this experiment.

Sir) Bezonji Dadabhoy Mehta, the experienced manager of the Nagpur Empress Mills.[3] The shorter hours were then more economical. In Dr Nair's opinion not only did the long hours induce loitering and bad work but they were also responsible for the periodic holiday that the labourer took in the country and also his frequent absence from work. These excessive hours were physically very harmful to the workers and they were early 'used up'. Dr Nair pointed in support of this contention to the remarkable absence of any elderly men in the factories. They also restricted the possible labour supply in the mills, for only those who could physically endure the strain could be employed.[4]

The excessive hours in the factory industry, then, limited the supply of labour forthcoming. The same might be said of the deplorable and insanitary conditions in some industrial centres. For these also discouraged the movement of labour into these centres. There was at this time in India a loud complaint from all the manufacturing establishments of the scarcity of labour. A difference must be made here between two kinds of scarcities. There were certain establishments which suffered a chronic scarcity of labour. This was generally felt only in the industries or factories where the working conditions or housing conditions were utterly bad, or where the work was particularly strenuous. Thus Foley found that in Bengal there was chronic scarcity only in the cotton mills of Calcutta (where the hours were very excessive and wages much lower and work much harder than in the jute industry), in some jute mills at Howrah (which were in a terribly congested locality and where the housing conditions were particularly bad), and in the coal industry for coal-cutting.[5] In the coal industry it should be noticed that there was no shortage at all of surface labour. There was also a chronic shortage in many of the United Provinces centres. This is really surprising when we consider that the districts surrounding these centres themselves supplied a great portion of the emigrant population of India

[3] ibid. Evidence; see also his paper read before the Third Indian Industrial Conference, 1907.

[4] ibid. Evidence of Mr Freemantle.

[5] B. Foley, *Report on Labour in Bengal* (1906).

and also a very great portion of the labour force for the Calcutta industries. The chronic shortage was due, in most of these centres, to the conjunction of two factors—very bad working conditions; and very bad housing conditions. The chronic shortage was, then, due to the conditions obtaining in the industry and not to any other factor.

But there was another phase of the question of the 'scarcity of labour'. This was the periodical scarcity. The only industries which did not feel this periodical scarcity were (i) those in which particular care was taken of the labour supply; or (ii) those which provided kinds of work specially liked by the Indian labourer; or (iii) seasonal industries which did not clash with the busy season of agriculture. The Giridih coal-fields afforded a good example of the first kind. Here special care was taken of labour and there was never any shortage. The same was the case with the Calcutta jute mills which provided good lines for their coolies. Then again, there was never any shortage of labour for railway construction, which was particularly liked by the Indian labourer. The jute pressing industry provides a good example of the third kind; and here also no scarcity at all was felt.

But a periodical scarcity was felt in all the other industries. The period, however, at which the scarcity was felt differed from one place to another. This depended chiefly on the localization of the industry. It is difficult to make a generalization, but it may be said that in an industrial centre surrounded by rural districts from which it drew its labour supply this shortage was felt at the harvest season, while in an industrial centre whose labour supply was drawn from distant districts the scarcity was in the hot weather or the marriage season (both these coincided). Thus shortage in Cawnpore was particularly acute at the time of the movement of the crops; in Sholapur the scarcity was only felt at the harvest season and so also the labour of the coal-cutters, who were generally aboriginal Santhals, was specially scarce during the harvesting and cultivation of their rice crop.[6] On the other hand, the periodical shortage was felt in both

[6] E. A. Horne, 'Industrial Development and the Labour Question', *Bengal Economic Journal* (April 1918).

Bombay and Calcutta in the hot weather and marriage season. The first kind of scarcity explains itself. It is obvious here that the labour has not yet severed its connexion with the land. The labourer is still partly an agriculturist; most probably he owns a plot of land or has a share in one, and goes home to assist his family in harvesting the crop. This is a definite and marked stage in the industrial development of every country. This sort of periodical shortage could not be removed until, with the growth of a large industry, a definite factory population was created. Labour in Calcutta and Bombay marks an advance on this stage. The labourer here, at least in Calcutta, is a member of an agricultural family, but he has severed his connexion with the land, in so far as he no longer regularly works on it. Here we have to differentiate between Calcutta and Bombay labour. The Calcutta labourer, who generally came from the United Provinces, did not bring his family with him to Calcutta. Therefore he periodically went home. The severance from the land both of Bombay and Calcutta labour was first induced by the distance from home. In the case of Bombay labour, however, the severance was almost complete; for the Bombay labourer came to the city with his wife and often the whole family would come up to Bombay to work in the factories. But even the Bombay factory worker was not completely an urban worker. He kept up his connexion with his native village, periodically visited his home, and generally retired there in his old age. He also sent his wife for child-birth to his native village. There is no obvious explanation for this. For the labourers do not seem to have any direct connexion with the land. The following are a few extracts from the evidence before the Factory Commission on this point. One witness stated: 'The elderly men retired to their village and could not return to mill-work because their constitution was generally shattered; generally they had not saved anything and had to live by cultivating the soil.'[7] Another stated: 'The elderly people retired to their homes when they reached 40 or 45. If they had saved money they followed a small trade, and if not they remained

[7] *Factory Labour Commission*: Evidence of Mr Keluskar.

in Bombay and their children kept them.'[8] The most reliable evidence, because it is of one of the operatives themselves, gives this: 'Very few of the Bombay operatives are settled in Bombay; almost all of us have our homes in Konkan and go there once every year or two for a short visit. When a man is too old to work he does not return to Bombay, but passes his old age at home, *being helped by remittances sent from Bombay by working members of his family*.'[9] The reliance on savings or remittances in old age shows that the operative did not own a share in land; he did not go to the country for agricultural work but for a holiday. The severance of this worker, economically, from the land is certainly complete. There must have been, therefore, some strong reasons which prevented the labourer from settling definitely in Bombay; and it seems probable that but for the very bad housing and sanitary conditions in that city a definite, permanently settled factory population would now have been developed there.

The periodical 'scarcity of labour' was, then, a natural result of the phase of industrial development through which India was passing, a result which was, however, greatly intensified by the conditions obtaining in Indian industry.[1]

[8] ibid. Evidence of Mr Nare.

[9] ibid. Evidence of Bhiwa Bawaji (Italics mine).

[1] See B. Foley, op. cit., chap. vii. Mr Foley finds that 'the present state of affairs in Bengal cannot be said to be inconsistent with the conditions of life of the factory operatives and the agricultural classes'. This was generally painted by the manufacturers as a highly anomalous state of affairs.

CHAPTER IX

Railways and Irrigation

THE correlation of the railway systems and the canal systems in India is not the same as in most other parts of the world. Almost everywhere else, they are merely the two branches of a transport system. The commercial revolution in England, finally brought about by the extensive railway construction, was begun by an English system of canals. This was also the case in many Continental countries. In India, however, canals are rarely built for the purposes of transport. Inland water transport in India is carried only on the big rivers, and even on these the parts navigable throughout the year are of a comparatively short length. On the canals, the only systems on which navigation was possible to any large extent were some of those in Bengal and Madras.[1] The obvious connexion, then, between the canals and railways did not hold in India.

But they were inter-connected in other ways. Firstly, the Indian Government soon discovered that private enterprise could not be relied on to carry on the work of railway and canal extension in India; so a very important department of the Government—the Public Works Department—took charge of both these works of public utility. This was the work of Lord Dalhousie. Irrigation and railways were again connected in another way. For the original reason given for a rapid extension of both these was the same, i.e. protection against famines; and the respective merits of these two for this purpose was the subject of a very keen controversy, carried on during the last three decades of the nineteenth century.

Section I.—*Railways*

The original policy of Government in the construction of railways was the policy of guaranteed companies. The con-

[1] 'Except in the deltas of the Krishna and Godavari there is no system of navigation in India, which is of any great advantage to the people.' *Report of the Indian Irrigation Commission, 1901-3,* chap. xviii.

struction was carried on and capital found by private companies, who were guaranteed a 5 per cent interest on their capital; the surplus profits over this 5 per cent, if any, were to be divided equally between the company and Government. Government in these contracts reserved to itself the right to purchase the line at the end of 25 or 50 years. The construction of railways in India was carried on on this plan till 1869; but it was found to be extremely uneconomical, and every year Government had to pay to the companies a substantial sum on account of the guarantee. In the beginning it was supposed that the railways would begin to pay over 5 per cent within a very short time of their construction, but this was proved to be an unwarranted supposition. The railway companies had also no inducement, on account of the guarantee, to be economical in their management.[2] The original plan having been found wasteful, it was given up, and from 1869 to 1879 Government tried the experiment of railway construction entirely on its own account. From 1879 private companies were, however, again allowed in the field. These new companies were guaranteed no interest, but in most cases they are financially assisted by Government, and in almost every case they were given land free of cost.[3] At the same time Government carried on railway construction on its own account, and it was also undertaken by the Governments of some Native States. Thus, through all these agencies the extension of railways had been, during this period, pretty rapid and continuous. By 1914 Government had acquired all the railways built under the old guarantee system. The extension by the private 'assisted' companies since 1879 had not been large, and in 1914 the major portion of the railway lines in India was state-owned.

Railway Systems in India in 1913-14

Total mileage of railway open for traffic	34,656	
Total mileage of state lines worked by companies	18,680	25,911 total state-owned
Total mileage of state lines worked by the state	7,231	
Total mileage of Native State lines worked by the State and by companies	3,396	

The rest was held by small private companies.

[2] *Report of the Select Committee on Public Works* (1879); also evidence before the Committee of Major-General Dickens, Juland Danvers and others.

[3] *Report of the Committee on Indian Railway Finance and Administration* (1907).

The first plans for the extension of railways were drafted by Lord Dalhousie, who first sketched the routes for the main trunk lines. The construction of these trunk lines followed mostly the lines laid down by Lord Dalhousie. The system on which railway construction was begun in India had not taken any account of the immediate earning of dividends. The development of railways, therefore, was peculiar. Attention was not directed to connecting contiguous trade points, and to exploring thoroughly the trade of each district through which the railway passed by a systematic construction of feeder lines. Instead, the scheme followed was to construct grand trunk lines traversing the length and breadth of the country, and connecting the big cities of the interior with the big ports—Calcutta, Bombay and Madras. By 1875 most of the big centres were so connected. The construction of these trunk lines was mostly the work of the guaranteed companies. The routes from the ports were generally sketched with the intention of traversing the important agricultural tracts of the interior, so as to facilitate the export of agricultural produce. From Bombay, for example, Ahmedabad and the Gujerat cotton tract, Nagpur, with the Khandesh and Berar cotton tract and Sholapur, with the adjacent Karnatic cotton tract, were reached before 1870. From Calcutta, the first extensions were towards the rich but congested tract of the North-West Provinces and the coal-fields near Raniganj, the route taken to the big cities of the north being through Mirzapur and Allahabad to Cawnpore and Delhi. Bombay and Calcutta were connected via Jubbulpore in 1870; Bombay and Madras in 1871. Calcutta had been connected with Delhi in 1867, but for a long time Bombay and the cities of north India were not directly connected. This helped greatly towards establishing the position of Calcutta in the export trade of the products of the North-West Provinces. One of the important routes not served for a long time by a railway was the route between Karachi and the Punjab, a fact which delayed the rise in importance of Karachi as a port. The most important grain tract not reached early by railways was Chhattisgarh. This was not reached till the eighties, and up to that time it showed the extraordinary effects of

the lack of proper means of communications on prices and the nature of scarcities. The Karnatic cotton also had not been properly reached by extension of the railway to Raichur; and the important centres of Belgaum, Dharwar and Hubli were not served by a railway till the late eighties. But, on the whole, the spread of railway communications was quick in India, and the most important centres were connected together quite early.

Protection against famines was one of the main reasons for railway extension in India; and no doubt the presence of railways helped greatly to lessen the effects of a famine. The Famine Commissioners (1880) found, after comparing the mortality statistics, that the greatest mortality due to famines was found in those tracts in which transport facilities were worst. By 1880 railway construction had gone far enough to afford sufficient protection to most of the tracts liable to famines. Protection against famines was, however, not the only reason for railway extension. An early Committee on railway construction gave the following reasons why it should be pushed on vigorously in India: (i) famine prevention; (ii) development of internal and external trade; (iii) growth of more remunerative crops in tracts reached by railways; (iv) opening up of coal-fields; (v) improvement of the economic condition of the people.[4] This Committee also, like all committees on railway construction in India, found that there was great need of carrying on the work of railway construction rapidly. The chief difficulty in following this policy was the bad state of Government finances in and after the eighties, which made wholesale borrowing for the purposes of railway extension a dangerous policy to follow. The Public Works Committee (1879) had recommended the policy of borrowing for railway purposes only, when it was expected that the railways would begin to pay within a short period. But the policy was reversed within a few years after the Committee's report, and Government began to use even the Famine Insurance grant for this purpose. This policy of Government, of pushing railway construction at all costs, was condemned in many quarters, and Mr Gokhale expressed a widely prevailing sentiment when

[4] *Report of the Committee on Railways in India* (1884).

he said: 'I do not mean that the railways themselves are to be condemned, but the manner in which the Government has been going on for more and more railways, starving more useful things, is an objection.'[5] In spite of all financial difficulties railway construction was, then, steadily carried on throughout the period.

There were two factors which mainly affected railway policy in India. The first was the lines on which the construction of these railroads was sketched, and the second was the question of management. The first factor, by the rapid construction of the trunk lines, encouraged through trade between the import centres—especially between the internal marts and the big ports. Railway construction at this time looked more to the development of the foreign trade of the country than to growth of the internal trade. In the absence of any large industries in India at the time, this policy was perhaps natural, but it left a permanent mark on the nature of the freights charged, which to a great extent hampered the industries of India at a later date. Indeed, this policy was not changed at all till 1914. The result of this historical decision was that (in the words of the Industrial Commissioners) 'generally speaking, favourable rates for raw produce moving to the ports have resulted'.[6] Further, the rates had been particularly hard on the industrial centres in the interior of the country, and had resulted in a concentration of industries at the ports. The freights were specially felt by the coal industry.[7] The other obvious effect was that these differential rates somewhat helped the port industries and the foreign industries in their competition with the industries of the interior.

The question of management was rather peculiar. Though the railways, especially since the beginning of this century, have been mostly state-owned, the bulk of them have been managed for Government by a number of different companies. Thus the advantages of a common railway policy, generally to be expected from single ownership, were not obtain-

[5] Evidence before the Welby Commission, 1896-1900.

[6] *Report of the Indian Industrial Commission, 1916-18,* chap. xix.

[7] T. Robertson (Special Commissioner), *Report on the Administration and Working of the Indian Railways* (1903).

ed in India. A meaningless competition between the different railway companies for traffic has resulted, which is distinctly harmful to the general interests of the country. Again the companies themselves have not been allowed a free hand, and large supervisory powers were given to Government engineers, which obstructed the smooth working of the railways. The result was so harmful that Mr Robertson definitely stated it as his opinion that railways should either be completely state-managed or completely company-managed.[8] In the scramble for foreign trade, and by reason of this policy of dual management, there was one very important function which the railways did not fulfil. They almost entirely neglected the question of the development of local industries along their lines.[9]

The equipment of the railways, i.e. their rolling-stock, etc., was found to be sufficient for the purpose of trade till the beginning of the twentieth century, but after that, with the growing volume of external and internal trade, it was found difficult to cope with the traffic. The shortness of rolling-stock sometimes had unfortunate results, such as the inability of the railways to carry all the food offered to them from the Central Provinces to Gujerat in the 1899-1900 famine. From 1905 onwards this difficulty became specially acute. The large increase in traffic, especially in grain, coal and manganese ore, contributed largely to this result; and a large increase in rolling-stock and the addition of crossing stations, sidings, etc., were advocated.[1] But sometimes this result was due to causes outside the control of the railways. In places the traffic was so one-sided and was concentrated within so short a period, that it was bound to become congested during that period. This was the state of the Punjab exports of wheat through Karachi and also largely of the riverine traffic of Burma rice.[2]

The more direct effects of railway extension were a levelling of prices, especially those of food-grains, throughout

[8] ibid., chap. i.

[9] ibid., chap. iii.

[1] *Report of the Committee on Indian Railway Finance and Administration* (1907).

[2] F. Noel Paton, *Burma Rice* (1912). See also his *Indian Wheat and Grain Elevators.*

India, the growth of a large export trade in raw agricultural produce, and, in a certain measure, the extension of the cultivation of crops intended for export; a large impetus was also given to internal trade. The railways were also instrumental in helping the growth of Indian industries, especially coal and cotton. The whole problem of the coal industry, for example, was that of carriage from the pithead to the place of consumption. In this matter of industrial development, however, certain factors, detailed above, prevented the railways from pushing forward the growth of industries in India to the same extent as they would ordinarily have done.

Hand in hand with the extension of railways in India went on the extension of metalled roads. The policy of trunk lines necessitated the construction of good roads, if the railways were to serve any useful purpose. The extension of roads was as rapid as that of railways, and road construction affected the village life of India rather more directly than railway construction. The road increased the importance of the weekly market in the village economy, and also the importance of local fairs. At the same time the expansion of railways made possible the distribution of foreign goods throughout the country with the help of these markets and fairs. The extension of roads helped also to break down the self-sufficient nature of the village, and had an important effect on the nature of village cultivation. Localization to a certain extent was now possible, at least among the adjacent group of villages. Thus this spread of communications had a very large share in the break-up of the compact character of the village community.

Section II.—*Irrigation*

While the construction of railways was a new method of fighting famines, irrigation was a very old one. The grand 'anicuts' of the south, some of which are of great antiquity, bear testimony to this; so also do the many works of the Mogul emperors on the Ganges and the Jumna; while the inundation canals of Sind, and the tanks, wells, dams and field embankments, which were to be found in all parts of

the country, showed that the people of India took great care of the water for their crops. The development of irrigation in India under British rule followed the lines indicated by the works of the old Indian rulers and the practice of the Indian cultivator. The application of modern engineering methods made this development possible on a larger scale than ever before.

The East India Company, after it had been established in India fairly securely, devoted some attention to this question. The first work undertaken was the restoration of old works which had fallen into neglect, viz., the East Jumna and the West Jumna canals, and the Kaveri and Koleroon anicuts. There were also a few new irrigation works constructed; the Ganges Canal was built, and the Godaveri anicut—the work of Sir Arthur Cotton—was also completed during this period. The policy of the extension of irrigation works in these tracts was continued even more vigorously after the Company's rule came to an end. The works were always built by the Government itself. The method of private companies was tried but failed disastrously.[3] Between 1860 and 1880, the most important works undertaken were the Lower Ganges Canal, the Agra Canal, the Sirhind Canal in the Punjab and the first important British work in the Bombay Deccan—the dam at Khadakwasala. The progress up to 1880, however, had not been rapid; a good deal of the money had been thrown away on a few hastily conceived projects and no definite policy as regards irrigation works had been laid down. The value of irrigation in times of famine has always been recognized and the extension of irrigation facilities was always one of the main recommendations of all Famine Commissions. The Famine Commission of 1880 recommended a definite programme of works and by 1895 most of these were completed. They were the Sutlej and the Chenab Canals in the Punjab; the completion of the Lower Ganges and the Betwa Canals in the United Provinces, and the completion of the line of navigable canals between Cuttack and the Hooghly. The creation of the Famine Relief and Insurance Fund was also

[3] cf. the notorious example of the Orissa Company.

a direct outcome of the famine of 1877-8; and from this fund a large number of protective works—railways and canals—were financed. The beginning of the construction of protective work dates from 1881, in which year sanction was accorded to the Betwa Canal project in Bundelkhand. Apart from this a few protective works had, by 1900, been completed in other parts of India, notably the Bombay Deccan, the most important among these early works being the Nira Canal System. The Commission of 1896 also drew up a definite programme, but the lines on which the work was afterwards carried out were laid down by the Irrigation Commission (1901-3). A very comprehensive review of the whole problem was taken by this Commission in its report and detailed recommendations regarding particular works under consideration as well as the general lines of policy were made; the Commission's attention was specially directed towards the desirability of the extension of irrigation as protection against famines. Most of the new works undertaken since 1903, have been the result of this Commission's recommendations. By 1914, however, though a great many projects were in hand, not many had been completed; chief among these were a few productive works in Sind, etc., and protective works like the Tribeni Canal in Bihar, the Ken Canal in Bundelkhand and a few other projects.[4]

A specially interesting episode in the development of irrigation in India is the creation of the Punjab Canal Colonies. In all other projects of irrigation the main object had been the improvement of existing cultivation or making it more secure. The Punjab Canal Colony projects brought large areas of waste land, where there had been no resident agricultural population before, under cultivation. The first important work was the Lower Chenab Canal which was opened in the year 1892. The colonization of the tract made cultivable by this scheme proved eminently successful and later on Government was encouraged to undertake a series of similar projects. These canal colonies have proved a most remunerative investment to Government and have, by adding several thousand square miles to the agricultural areas of the Punjab, greatly relieved the pressure of population

[4] *Review of Irrigation in India*, chap. ix (1918-21).

in the congested districts of the eastern Punjab, from which the colonists were mostly recruited.

The Famine Commission of 1880 had given an estimate of 29 million acres as the total irrigated area in British India at that time. In 1903 the Irrigation Commission put the average irrigated area in the whole of India at about 44 million acres and estimated that during the last quarter of the nineteenth century the area irrigated by Government works had risen by about 8 million acres and that irrigated by private works by at least 3 million acres. In 1913-14 the total area irrigated was about 46.8 million acres.

There has been adopted in India a twofold classification of irrigation works. All works are either 'major' or 'minor'. For the major works detailed accounts are maintained separately both of capital and revenue expenditure. Generally the accounts were not so kept for the minor works. The major works were further divided into 'productive' and 'protective' works. The productive works were those in which the construction of a canal would enhance the area under cultivation, or the value of the crops, to such an extent that the payments made for water would yield a handsome rate of interest on the cost of construction; the protective works were those which did not pay much, sometimes not even their working expenses, but which it was absolutely necessary to construct for the protection of the tract against famines. The productive works were mostly those in the Ganges and Indus basins, the Sind inundation canal systems, and the big river delta works of the Madras Presidency; while protective works had chiefly to be undertaken in tracts like the Bombay and Madras Deccan, Bundelkhand, etc.

Not only did the construction of irrigation works not pay everywhere, but there were definite limitations to the extension even of protective works. In this connexion the Irrigation Commissioners remarked: 'We are convinced that there are many parts of India, where the utmost use of every possible means of irrigation will fail to afford complete protection against the failure of rainfall.'[5] The development of irrigation, which had thus taken place in India, benefited chiefly

[5] *Irrigation Commission Report*, chap. ii.

only certain parts of the country. The Irrigation Commissioners divided India into three parts according to the nature of their soil: (i) Alluvial; (ii) Crystalline; (iii) Deccan Trap. The alluvial tract was mostly the Indo-Gangetic plain, the Deccan proper consisted of Deccan trap and the rest of India (chiefly the Madras Presidency, Mysore, Orissa and Chota Nagpur) was crystalline. They discovered that, while nearly 25 per cent of the alluvial tract was irrigated and 15·5 per cent of the crystalline, only 3·2 per cent of the Deccan trap area was protected by irrigation. The bigger rivers all flowed through the first two, but, on account of the evenness of the surface, canal construction was easiest in the alluvial area. In the crystalline tract tank storage was the most suitable form of irrigation. But in the third the absence of big rivers and the nature of the ground made canal construction extremely costly. Thus the scope of the extension of the big irrigation works by the state was restricted, and the utility of such works also could not be extended equally to all parts of the country.

The works constructed by the state, however, did not occupy the whole field; in 1903 only 42·2 per cent of the total irrigated area was watered by the state works, and the rest by private works. Of these private sources, the most prominent means were tanks, wells and field embankments. There are no reliable data as to the extent of the increase of the area irrigated from these private sources, but the Irrigation Commissioners estimated it to be considerable. Here also it is to be observed that the first two tracts were the most benefited. In the Deccan trap area, the only important method of irrigation was by well-construction. On account of the depth of the subsoil water in the tract, and the nature of the ground, the boring of a well was very costly here; but, once built, the well was much more durable than in other parts. Field embankments were used for the purpose of retaining rain-water in the field, as well as for preventing the erosion of the soil.[6] The uses of all these

[6] Sometimes these were of a considerable importance. For example the system of *bandharas* in the Khandesh and Nasik Districts of Bombay Presidency.

means were well understood and their extension carried out by the cultivator, wherever his means and the circumstances permitted. The encouragement of a further extension of these private sources of irrigation by liberal allowances of the 'takavi' grants was strongly advocated by the Irrigation Commissioners.

Irrigation was not always an unmixed blessing, and in the absence of a very good drainage system, water-logging and malaria often followed. In some of the earlier built canals, the evil not having been realized, sufficient attention was not paid during the construction of the canal to the drainage system of the land round about. In the United Provinces and the Punjab, water-logging was often accompanied by the rising to the surface of a saline efflorescence called *reh*, which made the land unfertile. A good system of drainage, and care taken before and during the construction of a canal, were the only remedies against this evil.

The great advantage of irrigation was that the danger from the vagaries of the seasons was very greatly minimized by it. When the immense effect of a famine in India is taken into account, the value of this will be readily realized. Irrigation thus not only made directly for greater prosperity, but prevented almost all the bad effects of famine or of the fear of famine. Its most important beneficial effect was that it encouraged agricultural improvement. It encouraged the cultivator to sink his capital in the land by taking away the fear of an uncertain rainfall. The contrast in the methods of cultivation in the irrigated tracts and in those which were not so protected was very marked. One of the best instances of such a contrast was that between the standard of cultivation in the area irrigated by the Nira and Mutha Canals and the standard in the other parts of the Bombay Deccan. Further, it became necessary for the cultivator to go in for the more remunerative crops like sugarcane and cultivate intensively, if he wanted to pay the water rate, the extra rent, etc., on a piece of irrigated land. Thus these two factors, a comparative steadiness of return, and the high rents and other charges, induced the cultivation of the more remunerative and specialized crops, and made cultivation more intensive. The peasant could not

make the cultivation of ordinary food-grains in the usual way, for family consumption, pay; he had to grow a highly priced crop intended for the outside market—Indian or foreign. The effects were the same whatever the crop—whether wheat in the Punjab or sugarcane in the Deccan. It helped the movement of commercialization of agriculture, and very definitely encouraged the tendency of growing for the market as against that of growing mainly for home consumption.

CHAPTER X

Growth of Towns[1]

Dr Clapham says 'the best general test of the industrialization of a nation's life under modern conditions is the rate and character of the growth of its towns.'[2] Some light, therefore, would be thrown on the recent industrial development of India by an examination of the rate and character of the growth of urban population in India.

Though we have no statistics to prove it, it is well-known that the urban development of India was, considering the state of industrial progress, far advanced. We know, for example, that in Clive's opinion the city of Murshidabad was in his day more populous than London: and that north India and Bengal at this time contained many big and populous cities. Again, we have no reason to suppose that the urban population of India was in any way growing between 1800 and 1872. The only cities to which any growth at this time can be definitely ascribed were the ports of Calcutta, Bombay and Madras, and a few places in the interior, like Cawnpore; but, on the other hand, there was certainly a great decrease to be accounted for in the population of a large number of old capital towns, e.g., Dacca, Murshidabad, Lucknow, Tanjore, etc. Indeed, considering that modern industry was almost non-existent in India at this time, and that the extension of transport facilities was not yet largely advanced, it seems more probable that the percentage of the urban population in India was slightly bigger at the beginning of the century than in 1872. In 1872 the percentage of urban population was 8·7 per cent: it seems, therefore, safe to put the proportion at the beginning of the century at least between 9 and 10 per cent. In western countries the percentages of the urban population

[1] This chapter is based almost entirely on the reports, provincial and imperial, of the different censuses.

[2] J. H. Clapham, *Economic Development of France and Germany, 1815-1914*, p. 53 (1921).

towards the beginning of the nineteenth century were: England and Wales 21·3, Scotland 17·0, France 9·5, Prussia 7·25, Russia 3·7, U.S.A. 3·8.[3] We might then conclude that urban development in India had progressed at the beginning of this century at least as far as it had in France.

The nature of the population of these towns has already been described. For an estimate of the population of India, the first available statistics are those of 1872. The results of the 1872 census itself are of somewhat doubtful accuracy; but the later censuses were fairly accurate. The chief defect in the statistics of urban population in India is that the definition of a 'town' has varied from census to census. Not only this, but the provincial superintendents of the census have interpreted this definition each in his own way. Generally speaking, a town was defined as any place containing over 5,000 inhabitants, or any place of over 2,000 inhabitants with definite urban characteristics. At the same time many places even over 5,000 which were considered to be merely large villages were left out. It is, therefore, in the group of towns of under 10,000 that the statistics are most unreliable. The difficulty felt in all countries, of a constant shifting of civic boundary, is also met with in these statistics. On the whole, however, for broad generalizations and comparison in big groups the statistics are quite reliable.

Again, it might be pointed out that there is a certain defect in treating these urban statistics for India as a whole. For here there are sharp differences. In Bengal Presidency the proportion of the urban population to the total is only 5 per cent, while in Bombay Presidency it rises to over 17 per cent. Unfortunately, the arrangement of provinces at present [1924] is so haphazard that none of them displays, as a whole, any entirely homogeneous features. The contrast between different economic spheres is even sharper; for example, on the plateau of Chota Nagpur only 3 per cent of the population live in towns, while in the populous province of Gujerat nearly one-fifth are town dwellers. But if we leave aside these extreme cases, the proportion is in most parts of India between 8 to 12 per cent of the total population; and even though the proportion may vary, the nature

[3] A. F. Weber, *Growth of Cities in the Nineteenth Century* (1899).

of the town population and the causes governing its growth or decay are the same everywhere.

The census authorities have divided the towns into various classes but it is unnecessary here to adopt their classification in full.[4] We would suggest a threefold division. The class of small towns, i.e. towns of a population of 20,000 or less; another of intermediate towns i.e. with a population between 20,000 and 50,000; and that of large towns or cities, the limit of which may be placed in India at 50,000 and over. In the case of small towns, the limit at 20,000 helps to eliminate very largely the statistical inaccuracies in the class of very small towns. The proportions of urban population to the total at the time of the different censuses were as follows:

1872	...	...	8·72 per cent
1881	...	...	9·41 ,,
1891	...	...	9·46 ,,
1901	...	...	9·88 ,,
1911	...	...	9·42 ,,

The table fails to suggest any considerable movement in either direction. The only increases in the proportions, of any account, are in the decades 1872-81, 1891-1901 and 1911-21. Between 1881 and 1891 the proportion is stationary, while between 1901 and 1911 it has actually fallen. The reports of the 1921 census make it clear that this decade, even though it shows an increase, cannot be said to have brought about any considerable change.

On account of the inaccuracies in the census of 1872 it is doubtful whether the increase in the decade 1872-81 is really as large as it is shown to be. Thus the urban population has grown just a little more quickly, if at all, than the total population of the country.

The same steadiness of proportions is discovered when we come to see whether there has been any change as regards the character of the urban population—any variation in the proportion of the different classes. This also has been almost entirely steady.

[4] See table at the end of the chapter.

Percentages of the Population of the three Classes of Towns to the total Urban Population

No. of inhabitants	1872	1911	1921
20,000 and under	47·3	47·4	45·5
Between 20,000 and 50,000	18·3	18·7	18·3
50,000 and over	34·4	33·9	36·2

Here there is no corroboration found, if the period be taken as a whole, of Levasseur's proposition, that the power of attraction of human groups is generally proportionate to their mass.[5] Indeed, the larger towns have slightly lost their place, and the only fact that at all indicates this tendency operating at any time in India is that, during the decade 1901-11, nearly the whole of the rise in the urban population of India took place in the group of towns of 100,000 inhabitants and over.

Thus an examination of the statistics of the urban population does not help us at all. It would indicate, if anything, an economic stagnation in India. We are, in this case, forced to resort to a somewhat general consideration of the different forces that have been acting on the growth of towns in India during the last forty years.

One of the most important factors determining the growth of towns in India at the present time is railway construction. This is a factor which affects the growth of towns in two ways. Firstly, the advent of the railway to a town means generally an increase in trade. If the town is already an important trade centre, the railway greatly enhances its importance. It also has the effect of creating new centres of trade in the tract through which it passes. But if a railway tends in this way to increase the town population, it has also an opposite effect. Often the exigencies of railway construction make it necessary that the old towns should be left aside from the main line. This, naturally, means a diversion of the old channels of trade, and spells the decay of the old towns.

Putting aside railways for the moment, the other factors making for an increase in town population are: (i) new industries or further growth of old industries; (ii) famines;

[5] Weber, op. cit., chap. ix.

(iii) creation of a landless labour class; (iv) tendency of wealthy landlords and others to live in towns. Of all these different causes, the growth of industries has been, at any rate in all other countries, the most important one. But in India its influence has certainly not been as powerful. Indeed, there are very few towns in India at the present moment which are creations of new industries. A conspicuous exception is Jamshedpur which has been created entirely by the activities of the Tata Iron and Steel Works. But in very few other cases has there been such a growth merely because of industries.

Famines, on the other hand, have been of much more frequent occurrence in India than the creation or growth of new industries; and famines certainly add a great deal to the urban population. During famine time the rural population is out of work; indeed, an Indian famine might be described as a time of national unemployment. As there is no work in the fields, the country population goes to the towns in search of it. In the olden times this movement towards towns in times of famine was very marked. It is said that in the great Rajputana famine of 1868, Agra, Delhi and the other adjoining towns almost doubled their population. But since the improvement of communications and the evolution of a good relief system, this movement towards towns has been greatly checked. Even thus we find that the two decades, i.e., 1872-81 and 1891-1901, in which the movement towards towns was most marked, were both decades in which there were widespread famines in India. But it must be pointed out that, though famines may drive people towards towns, this movement cannot be more than temporary, unless there are occupations in these towns which can absorb this influx of population. In the absence of such occupations the crowds of people who have flocked into towns have to return to the country, as soon as they can find agricultural employment.

The same remarks apply to the creation of a class of landless labourers. The creation of such a class is one of the results of famines; it also results from the steady movement towards the dispossession of old peasant proprietors, which has gone on in India now for nearly fifty years. The creation

of a class of landless labourers helps or promotes urbanization only negatively. Such a class is not so bound up with the soil as are peasant proprietors; it is, therefore, more ready to migrate to towns; but here also it will be observed that they can permanently migrate to towns only if they can find employment for themselves there. Indeed, for any movement of the populace there must be an active inducement, and such inducement will be most powerful if it comes in the shape of an increase in wage, or a rise in the general standard of living.

Lastly, we may take into account the tendency of wealthy landlords and others to settle in towns. There is no doubt that, in modern times, as the attractions of urban life have become powerful, there is a distinct encouragement to absentee landlordism and thus to a partial increase in the population of towns.

It will be apparent that, the numbers of the wealthy classes being very restricted, the numerical effects of this movement may be considered as entirely insignificant.

Thus on an examination of these causes, it will be found that the only important factors that effect a definite and permanent movement from the country to the town are the increase of trade and the growth of industries.

On the other hand, there are a number of other influences acting today in India in the opposite direction. These may be enumerated as follows: (i) diversion of trade routes into different channels; (ii) decay of old handicrafts; (iii) epidemics; (iv) insanitary conditions and bad housing in towns. The diversion of trade routes is a consequence of railway expansion and other causes. It has been a very conspicuous factor in the decay of many old towns. As an illustration, we might take the case of Mirzapur. As pointed out before, this town on account of its position on the Ganges was an important trade mart. It reached the height of its prosperity when, in the Lancashire cotton famine of the sixties, all the cotton exports of north and central India had to pass through Mirzapur down the Ganges. But soon after, the construction of railway lines along the Ganges deprived the river traffic of a great deal of its importance; and Mirzapur began rapidly to decay. To take another example, Saugor,

before the railway period, was an important trade centre, and the chief depot for the distribution of salt throughout the Narmada Valley and the Central India Agency; but with a change in the trade route, Saugor rapidly decayed. Railways are not the only agencies responsible for the change of trade routes. There are the vagaries of the river courses to be taken into account. Myingyan, a flourishing town in Upper Burma, was entirely ruined because the Irrawaddy changed its stream. Many old towns in Lower Bengal were thus ruined on account of the changes in the course of the Ganges. Such a diversion of trade happens in cases of local trading centres left aside by railways; but it is not necessary that they be entirely left aside. Even an advantage of a few years in the building of the railway to another town is enough to divert the old channels of trade. Thus Cawnpore gained a lead on Lucknow in the grain and hides trade of Oudh merely because the railway to Cawnpore was built before that to Lucknow.[6]

The decay of handicrafts is an even more potent cause than the diversion of trade channels. As pointed out above, the industries of old Indian towns were in the main luxury or art industries; and these depended for their prosperity on the demand from the nobles and the courts. With the abolition of the courts the demand for the greater part vanished. Of course, the industries did not collapse at once; they were old established handicrafts, and the Indian aristocracy for a time demanded many of these goods; similarly there was an active European demand for artistic knick-knacks, which, though it debased the industry from the standpoint of art, still helped the craftsmen to struggle on. But, with the influx of education and the creation of the Indian 'bourgeoisie', the demand slowly died, and the handicrafts, threatened with cheap European competition, became increasingly unimportant. The craftsmen slowly gave up their old occupations, and had to resort to agriculture or any other occupations in which they found an opening. Such a decay of handicrafts and the consequent decrease of population was the fate of a great number of old towns. The process was naturally a slow one, but it was well mark-

[6] Hoey, op. cit.

ed; and it was only in towns which could find alternative occupations and start new industries that the population did not suffer a loss. A very important case of such a recovery is afforded by Dacca. After the abolition of the courts of the Nawabs, Dacca, with its famous muslin industry and other handicrafts, suffered a rapid decline; this decline was continuous till 1870. But at about this time the cultivation of jute became popular in East Bengal and numerous jute presses were established round Dacca. With this added trade and industry Dacca regained its importance, and has been increasing steadily during the last fifty years. At Amritsar, the decay of the shawl industry was compensated for by the establishment of a flourishing carpet industry in the nineties. Unfortunately the carpet industry was not on a sound basis, and therefore Amritsar got another setback during the next decade. Contrasted with the case of Dacca is the case of Murshidabad—a city which in Clive's time was considered superior to London, but which, since the time of the annexation, has been steadily declining; or take Malda, with its old silk industry, or Santipur, with its muslin industry, whose products were inferior only to those of Dacca. These cases are cited only from Bengal, but like instances could be produced from any part of India. For the story is the same whether at Mandalay in Burma or at Paithan in the Deccan.

The diversion of trade routes and the decay of handicrafts are causes which are actively leading to a decline in the town population, but epidemics and insanitary housing conditions also act against the growth of towns. Epidemics, like famines in the opposite case, drive people away from the congested urban areas to the open country. It will be observed that the proportion of the urban population fell slightly during the first decade of this century, a phenomenon which is mainly to be attributed to the prevalence, in wide tracts of India, of an epidemic of plague. This was particularly virulent in the Deccan, the Central Provinces and Bihar. This epidemic killed large numbers of the urban population, and drove away larger numbers from the towns. But the effect, like that of famines, is of a some-

what temporary nature. For the population tends to return to the towns as soon as the epidemic has passed away.

Insanitary conditions and bad housing accommodation affect the growth of towns somewhat differently. The movement, if there tends to be one, from the country to the town, is discouraged by these factors. The insanitary conditions of the Calcutta 'bustis' and the Bombay 'chawls' are well known and there is no doubt that bad housing conditions tend to keep away a good deal of the potential labour supply from these towns. This is conclusively proved by the fact that among Calcutta jute mills the labour difficulty, of which complaints are made so generally, has never been felt by those mills which provide adequate and sanitary lines for their coolies.

There is yet another factor. In some parts of India in the old days the tendency to concentrate in walled towns was very marked. This was mostly because walled towns afforded better protection against the bands of robbers which during certain periods were common. Such open robbery having become somewhat rare during the last hundred years, walled towns no longer served any useful purpose; and for people following an agricultural occupation it was inconvenient to stay in them. There was, therefore, during the seventies a distinct tendency in many parts of India, notably the Central Provinces, towards a disintegration of the population of these small towns.

So much for the simple process of the growth of towns; we may now consider further the question of the growth of cities at the expense of the smaller towns. The statistics do not give any indication of a movement of this kind. But though this is the case there are many references in the different census reports, which show that the smaller towns are either stagnant or decadent and the bigger towns increasing. On the other hand, some census superintendents are of opinion that the smaller towns show the bigger increases. There are certain reasons which would lead one to believe that there should be a greater increase in the big cities than in the smaller towns. Firstly, there is certainly at present a process going on in India of concentration of trade in the bigger centres. This is to be seen in the case

of a centre like Delhi; trade has greater facilities and better markets here, and is thus attracted from the surrounding small towns. As opposed to this tendency of concentration there is also the one, in the railway days, of diffusion. *The Punjab Census Report* (1911) has the following: 'Almost every railway station is a centre for export. Grain, cotton, etc., are drawn to these stations from the adjoining tracts, and the agents of exporting firms arrange to buy the produce as it reaches there, thus obviating the necessity for the producer to go to the trading centres in order to dispose of his surplus produce.' The effect of this is a decay in these local trading centres. Thus the decay of Ferozpur, during the last decade of the nineteenth century, was attributed to loss of trade owing to the produce of the villages, both far and near, which used formerly to be brought to the city, being drawn away by the opening of petty agencies of European and Indian firms at most of the stations on the railway lines.[7] Both these processes, that of concentration of trade and also that of diffusion, hit the smaller towns and trading centres most. Again, the rise in the rate of wages in the smaller towns had not, during the last thirty years, kept up with the rise in prices as much as it had in the bigger industrial centres. This lagging behind of the wage rate sets up a movement of the artisan population from the smaller to the larger towns.

There is yet another factor, and that is the centralization of administration. Under the present system, all the population subsisting by administration of justice, revenue, etc., the legal profession, and others, have to congregate in the district headquarters. In almost all other countries, this would mean a very insignificant proportion of the urban population; but, in a country like India, it is quite substantial. So generally, the district headquarters grow at the expense of the other centres in the district. For example, the decrease in the population of both Ellichpur and Wasim in Berar was attributed to the headquarters of the districts having been shifted to other towns. On a larger scale, a considerable part of the increase in the population of Dacca during 1901-11 was due to the creation of the new province

[7] *Punjab Census Report* (1901).

of Eastern Bengal and Assam, of which Dacca was made the capital. There are, then, certain influences making for a larger increase in the bigger towns than in the smaller ones; but these seem to have been nullified by the effects of a slow decay in a large number of big towns.

A general consideration of these somewhat varied influences might be supplemented by an examination of the progress of a few typical cities in India. The examples here have been taken entirely from the class of big cities. The increases in the two great cities of India, Calcutta and Bombay, have been considerable but they have not been remarkable, nor have they been steady. Beginning from the top, the first remarkable increase that we come across in the class of big cities is in Rangoon.

The population of Rangoon in 1872 was actually under one lakh; in 1911 it had reached two lakhs and ninety-three thousand, an increase in forty years of one lakh and ninety-four thousand. Rangoon had not acquired much importance in 1872; it was only after the annexation of Upper Burma and the growth of the export trade in rice that Rangoon as a port began to make rapid strides. Its progress has been continuous. Burma today [1924] exports more than three-fourths of the total rice exports of India and almost the whole of this export is through Rangoon. Latterly two industries, that of rice-milling and timber-sawing, have been started at Rangoon, but these industries are comparatively new, and employ only a small proportion of the labouring population. The other interesting feature about the population of Rangoon is that it is largely made up of immigrant coolie labour from India, and Rangoon depends for its growth on a continued supply of Indian labour.

A similar case to Rangoon is Karachi. Karachi stands in the same relation to the Indian wheat export trade as Rangoon to the Burma rice trade. The population of Karachi has more than doubled during the last forty years. This has been due entirely to the rise in the importance of Karachi as a port. It is noteworthy that Karachi possesses almost no industries of any importance. The growth of the population depends entirely on the trade carried on by the port. The class illustrated by Rangoon and Karachi is per-

haps the most important class of our big cities. It consists of ports, chiefly depending for their prosperity on their export trade. Within this class, even Calcutta and Bombay may be partly placed. But, of course, ports in India are few in number.

The next class to be considered will be that of the industrial cities. The best instance of this is Ahmedabad. Ahmedabad is an old city, famous for its handicrafts, and the skill of its artisans. But its modern prosperity is due to the factory industry. It has increased its population by nearly a lakh during the last forty years. The trade of Ahmedabad, except in cotton and cotton goods, is not very considerable, and it is unique among Indian cities in the fact that more than half of its population is engaged in industry. The main industry is, of course, cotton spinning and weaving, for which Ahmedabad has peculiar facilities, but it is now attracting some new industries, notably tanning and leather work.

But it must be admitted that the case of Ahmedabad is an exceptional one. There is no other instance of such a purely industrial town among Indian cities. Otherwise Madura and Cawnpore may be taken as representatives of the industrial towns in India. Both began their periods of prosperity as important trading centres. Cawnpore soon became the seat of the growing leather industry, and subsequently the cotton industry and the woollen industry also came to be established there. The town had been increasing steadily, but was rather hard hit by the plague during the first decade of this century. But it is at present perhaps the most important manufacturing centre in north India. In spite of this, Cawnpore remains, in a large measure, a trading town. Madura has a double history. Up to the beginning of the twentieth century it was very largely a trading centre in oil-seeds, cotton and grain, its prosperity being largely due to the development of the Periyar irrigation scheme. But during the first decade of this century, industries, especially handloom weaving and dyeing, have absorbed a very large share of the population of Madura.

Next comes the very large class of towns which are almost entirely dependent for their prosperity on trade. In these

are included the great internal trade depots like Lahore and Delhi. But Delhi may be considered as having a considerable number engaged in industry. It is not so with Lahore, and many other Punjab towns, like Multan and Rawalpindi. Multan has grown in modern times mainly because of its favourable position on the trade route to Karachi, and the increase in general export trade. There is nothing remarkable in this class of towns. They are all fairly big railway centres and large depots of grain, cotton, jute or oil-seeds. From a very large number, a few typical ones are Bareilly and Meerut in the United Provinces, Narayanganj in East Bengal, Nagpur in the Central Provinces and Hubli in the Bombay Presidency—all centres for the trade in raw agricultural produce.

On the other hand there is the not inconsiderable class of decaying towns. Patna, one of the oldest cities in India, is a rapidly decaying town. The decay is due to the loss both of its handicrafts and of its river-borne trade, added to which is the dire calamity of plague. Lucknow, the beginnings of whose decay have already been described, is another example. These belong to the class of dynastic towns. Next come the sacred towns, and most of these have also fared badly. Gaya is declining rapidly. Allahabad is stationary in spite of its position as the capital of the United Provinces. Benares decreased in population by 19,000 from 1891 to 1911. Muttra also is rapidly losing its important position. It must not be imagined that the decline is due to any wave of the agnostic spirit in India; the pilgrims still flock in their usual numbers, especially as the improved communications have made pilgrimage much less risky and also cheaper. But the demand from the pilgrims for the products of the old industries of these towns has decreased considerably. Thus the main reason for the decline in the population of the towns which were seats of courts, and of the towns which were places of pilgrimage, is the same. It is the decline of the old handicrafts. This is shown by the condition of towns like Baroda, Indore and many famous cities of Rajputana, which have steadily declined, in spite of the court being still in existence.

When, therefore, the statistics are considered, we find the

effects of the two opposite tendencies almost evenly balanced. The rate of growth in the growing towns is just enough to keep up the percentage of the urban population, in spite of a large class of stagnating or decaying towns. But this phenomenon of the decay of old towns is not peculiar to India. We see the same thing happening in England, when the industrial centre was shifted from the south to the north, and the old industrial towns like Norwich or Bristol lost their importance. But in England and most other countries, the growth of new industrial centres far outweighed the decay of the old ones.

The fact is, then, greatly emphasized by this, that in India the growth of industries has been taking place very slowly. Whatever little growth in towns there has been is due much more to the growth of commerce than of industry. The industrial city, with the exception of a few like Ahmedabad and Jamshedpur or a few jute towns on the Hooghly, is almost non-existent in India; and even in the mixed types, i.e. partly trading and partly manufacturing towns, the factor of trade far outweighs the factor of industry. Again there is a complete absence from India of any big town aggregates or what Professor Geddes calls 'conurbations'. The only town aggregate at all resembling the big town groups in Western countries is the group of jute towns on the Hooghly, taken together with Calcutta. There might also grow up such a group in the coal and iron belt in Bihar. In this connexion it may be observed that in most countries the largest town aggregates have been round the coal and iron belts.

The development of modern industry in India has been, then, very slow. This is conclusively shown by the fact that the growth of modern trade and industry has only just been able to counterbalance the decay caused by the decline of handicrafts.

Variations in Urban Population at each Census

Year of Census	1872	1881	1891	1901	1911	1921
Total population	206,162,360	253,896,330	287,314,617	294,361,056	315,156,396	316,017,751[8]
Urban population	18,082,484	23,935,382	27,254,611	29,183,528	29,748,228	32,418,776
Urban population classification						
Town of 100,000 and over	4,321,917	5,295,097	6,170,480	6,634,749	7,075,782	8,211,704
50,000 to 100,000	1,856,297	2,411,470	2,710,259	2,930,565	3,010,281	3,517,749
20,000 to 50,000	3,338,490	4,470,995	5,099,770	5,473,989	5,545,820	5,925,675
10,000 to 20,000	3,634,373	4,842,072	5,410,063	5,975,180	6,163,954	6,209,583
5,000 to 10,000	3,587,372	5,029,457	5,762,985	5,963,471	5,944,503	6,223,011
Below 5,000	1,344,035	1,886,291	2,101,054	2,175,574	2,007,888	2,331,054
Population added, at each census, owing to the enumeration of tracts omitted at previous census	.....	33,139,081	5,713,902	2,672,077	1,793,365	86,633

[8] Falls short of total population as the urban classification statistics were not available for some tracts.

CHAPTER XI

The Transition in Agriculture

THE division between different periods adopted in the previous chapters has been the division made by seasonal calamities. Famines, indeed, play so important a part in the agricultural and industrial economy of India that this division may on that account be well justified. It has been remarked above that at the very beginning of the period under review, the character of the Indian famine was changing radically; it is likewise to be observed that the importance of the famines during the whole of this period was slowly diminishing. Thus if we review famines from the 1861 famine in the North-West Provinces and the 1869 Rajputana famine onwards, we shall see that already the effects were less felt in 1876-8, and that even the succession of two severe famines did not produce as much suffering and mortality at the end of the century as in 1876-8. To turn to a more recent period, the recovery from the 1907-8 famine was very quick; and the effects of even so severe a failure of rainfall as that in 1918 were comparatively little felt. From these facts an obvious conclusion has often been drawn, that the agricultural classes today are more prosperous than they were, say seventy years ago. This, of course, does not necessarily follow. The effects of famines have not been so severely felt largely on account of the better means of transporting food-grains from one part of the country to the other and because of the greater efficiency in the conduct of relief operations. Even if the prosperity of those classes of cultivators, who had more to sell than to buy, increased on account of the rise in prices, it is doubtful how far the large class of agriculturists, who owned only a small plot and had to supplement their earnings largely by extra work, had improved their position. The real wages of agricultural labour are said to have increased since the begin-

ning of this century,[1] but it is not clear how far they had been protected against bad seasons by this increase. It seems likely that it was not so much a material improvement in the condition of the agriculturist as the better means of transport that was responsible for lessening, in so large a measure, the effects of famines.

It was this same ease of communication that was bringing about another important change in Indian agriculture. This change might be called, for want of a better term, the commercialization of agriculture. The basis on which agriculture was conducted in India was being slowly changed. Broadly speaking, the change might be described as a change from cultivation for home consumption to cultivation for the market. Every change in India during this period took place slowly and a large part of the cultivation in India is, even today [1924], carried on almost entirely for home consumption; but almost everywhere, where specialized crops or even the superior kinds of cereals are grown, cultivation for the market is largely practised. In a self-sufficient village economy where payment in kind is the rule and most of the services are paid for at harvest time, it is natural that cultivation should be entirely for the production of food supply for the cultivator's family. The spread of transport facilities, where it began to break down the compact character of the village, affected also its agricultural economy. The change was seen in a gradual extension of the area of some industrial crops under cultivation and a specialization in crops grown in different districts. Export trade increased and internal trade also to a very great extent. The growth in the area irrigated also helped this movement. But it is not so much to the increase in the area under industrial crops that we look for signs of this change, as to the changes in the methods of marketing the crop. It is the basis of cultivation rather than the proportion under different crops that has changed. The cultivator today does not try to grow every kind of agricultural produce that he may require at home,

[1] K. L. Datta, *Report of the Inquiry into the Rise of Prices in India*, vol. I, pp. 169-70 (1914). As against this see Keatinge, *Agricultural Progress*, chap. viii, who says that real wages have remained almost unchanged since the beginning of the twentieth century.

as he had to do when the means of communication were deficient. He is more ready now to resort to the market for his requirements and also for the disposal of his surplus produce. This market for agricultural produce of all kinds might, indeed, be said to have been non-existent before the middle of the last century. The first impetus towards this tendency of commercialization was noticed when a money economy was introduced into the village in the shape of cash assessments; but the effect of this could not go far until communications were improved. Then slowly rents in kind went out of fashion and cash rentals were introduced. The effect of this, combined with the assessments, was to compel the cultivator to sell a part of his produce immediately after harvest; and as, generally, the interest of the moneylender became due also at about the same time the part of the produce that he disposed of at this time was a large part of his total crop. In many cases the cultivator had to buy later on in the year, from his moneylender, part of the crop he had sold him at harvest time (i.e. in those cases where this crop was a food-crop). Thus the ease of communications which made the exportation of agricultural produce out of the village possible, together with the introduction of money economy, brought about this movement towards a commercialization of Indian agriculture. Even when the cultivator grew largely for home consumption his produce came on the market just after the harvest, because of these peculiar circumstances. The commercialization of agriculture had progressed most in those tracts where the crops were largely grown for export out of the country. This was so in the Burma rice area, the Punjab wheat area, the jute area of Eastern Bengal and the Khandesh, Gujerat and Berar cotton tracts. Through the operations of exporters an efficient market organization for moving the crops quickly to the ports had come into existence. In the Berar cotton tracts there are very many centres at which, just after harvest, large purchases are made on behalf of exporters and various mill companies. Here the cotton is generally brought to the market by the cultivators themselves and does not go through the hands of a very large number of middlemen. In the Burma rice trade, on the other hand, Mr Noel-Paton des-

cribes the market organization thus: 'In most cases paddy is taken over on the threshing floor by local traders, or small brokers or middlemen acting on behalf of the millers or speculators. The small local trader, known as the jungle broker, gets advances from traders or others at the railway station and goes round to the threshing floors buying at less than the railway station rate given him by his principal.'[2] Nearly all this rice was removed to Rangoon to be milled. In the cotton and jute tracts these market centres also attracted steam presses; while in the Punjab and also in the United Provinces, where the raw agricultural products had not to be worked up further before being exported, almost every railway station became a centre of export and attracted local traders and agents of exporters. The writer of the *Hyderabad Census Report* (1911) says with reference to the enormous expansion of the area under cotton in Marathwara, that 'when a country begins to produce the raw materials of manufacture in place of food-crops, it has started on the road to industrialization'. This statement cannot apply to India as a whole. For here was no large displacement of food-crops. In some tracts, certainly, the food-crops were largely ousted by the industrial crops, but in others they gained in favour. There was to some extent a redistribution of the proportions of different crops grown in various parts of the country and particular crops were now more largely grown in those tracts to which they were most suited. The result of this process was not necessarily industrialization; indeed, it is doubtful how far such industrialization has taken place in India. But commercialization of agriculture undoubtedly did follow. A very large portion of the total crop now came into the market instead of being retained at home. Naturally, the movement was not marked in crops in which there was either a large internal or external trade, but even when, as in the case of the millet crops, the internal trade was not important, a large proportion still came into the market as a result of certain circumstances.

These circumstances were the payment of Government assessments and the interest of the moneylender. To pay these two dues the cultivators had to rush into the market

[2] F. Noel-Paton, *Burma Rice* (1912).

just after harvest, and to sell a large part of their produce at whatever price it fetched. Most of the poorer cultivators had to buy back after about six months part of the crop they had sold away at harvest time. The prices at harvest time were very low, but in six months' time they had risen to heights which were absolutely ruinous to the cultivator who now came into the market.[3] Indeed Mr Noel-Paton remarks that, for example, the Burmese moneylender's profits depended very largely on the certainty of this six-monthly rise in prices. The cultivator who now came into the market sank deeper and deeper in debt and a few years of this process were enough to ruin him entirely.

This curse of indebtedness was one of the greatest handicaps to Indian agriculture. In a previous chapter a few causes of this indebtedness have been discussed. The nucleus of the peasant's debt was generally inherited; the force constantly acting towards augmenting this was the variation in the seasons. It was not only in the Deccan that the granting of rights of absolute proprietorship and the right of alienation of land to the peasant had resulted in a large increase in the peasant's debt. The same causes had produced an almost identical result in the Punjab.[4] Mr O'Dwyer, in a paper read before the Royal Society of Arts, shows the effects of the peasant being given absolute rights over his land.[5] By comparing the conditions in certain Rajputana States with those in British territory, he points out that in these states the cultivator was much less indebted on account of his not possessing absolute right over his land. Soon after the report of the Deccan Riots Committee, this had been found to be the case almost all over India, and at the close of the nineteenth century legislation was being brought into force in many parts of India restricting in many ways the right of the cultivator to alienate his lands. The Deccan Agriculturists' Relief Act was extended with certain modifications to many other districts of the Bombay Presidency.

[3] F. Noel-Paton, op. cit., also *Indian Wheat*, etc.

[4] S. S. Thorburn, *Musalmans and Moneylenders* (1888).

[5] O'Dwyer, 'Agrarian Conditions', etc., *Journal of the Royal Society of Arts* (1899).

The Deccan Act did not directly lay restrictions on the transference of land; but the new legislation, such as the provisions of the Central Provinces Tenancy Act (1898) restricting the right of transfer of *sir* (home-farm) land, or the Punjab Land Alienation Act (1900), did lay such restrictions. The Punjab Land Alienation Act made a difference between the transfer of land to a member of an agricultural tribe and transfer to a person who did not belong to an agricultural tribe, the latter kind being forbidden. The immediate effect of any Act of this kind was a contraction of credit. For example, one of the first effects of the Deccan Agriculturists' Relief Act was that the moneylending business suffered and the smaller 'sowcars' were impoverished.[6] This also meant that the cultivator did not get credit as freely as he did before the Act was passed. The Act in the Punjab and other places laying restrictions on the transfer of land had the same effect. These latter kinds of legislation had also the desired result of preventing transfers of land in large numbers. The Punjab Act has, indeed, been called the Magna Charta of the agriculturist. The relevant question here is whether these Acts checked the growth of indebtedness. They do not seem to have done so in any large measure. Where there was direct restriction on alienation of land by the peasant the Acts had the effect of lessening the number of such alienations. The various provisions giving discretionary powers to the magistrates to enter into the history of the debt checked the fraudulent practices of moneylenders. We are also told that moneylenders now required good security or a direct mortgage of the land, before they advanced substantial sums to the cultivators. Nevertheless, the legislation did not and could not prevent the growth of the indebtedness of the peasantry. It modified some of the worst features in the operations of agricultural credit in India, but with a very small holding and widely fluctuating seasons the peasant's necessity for credit remained as powerful as before. It was not, however, only during the adverse seasons that his debt increased. A period of prosperity also generally saw an increase in these debt charges. The period of prosperity

6 *Papers relating to the Deccan Agriculturists' Relief Act,* 2 vols. (1875-96).

during the cotton boom combined with facile credit had made the Deccan cultivator hopelessly indebted.[7] The same effects of prosperity were witnessed in the Punjab from the beginning of this century.[8] In many places prosperity and indebtedness also went hand in hand with demoralizing habits. A period of prosperity has this effect because it makes credit easy to obtain. For prosperity means also a steady increase in rentals and land values; a land-owning cultivator finds his credit vastly expanded and he does not hesitate to draw upon it freely. The ruinous effect of this process is realized by him only when a period of adversity comes in. Against these effects of a facile credit and prosperity, a mere negative contraction of credit in certain directions was not very effective. As a matter of fact, in a few cases such restriction made the ultimate effects of credit on the peasant even more onerous than they were before. What was wanted and what alone could really cure the evil, was a positive modification of the terms on which credit was obtained and a salutary check on the purposes for which the cultivator sought credit. No amount of legislation could bring about this result and the only remedy that has been found successful, as yet, is the spread of a co-operative credit system and the diffusion among the cultivators of the co-operative spirit.

It is impossible to determine the extent of the dispossession of old peasants by moneylenders. The only guides here are the statistics of mortgages and the decrees of courts; as guides these are imperfect and the statistics compiled are in themselves very incomplete. The general reports seem to indicate that until the end of the last century the process was constantly on the increase. The growth of population was an important factor. In the earlier part of the nineteenth century, when land was plentiful and labour scarce, the moneylender had no inducement to take over the possession of land. By 1860 this was no longer the case and land values began steadily to appreciate. So at about this date may also be put the beginning of the process of the

[7] See above, chap. ii.

[8] M. L. Darling, 'Prosperity and Debt in the Punjab', *Indian Journal of Economics* (January 1921).

transference of land from the peasant into the hands of the moneylender.

Government took steps at the beginning of the present century to check the rapidity of this process in those parts where the effects were most marked, e.g., the Central Provinces, the Punjab, Bundelkhand, etc. The dispossession of these old proprietors still continues, though its rate has been checked by legislation. The effects of this process are certainly bad in India. In most parts of the country the moneylender is not an agriculturist, and even where the land passes into the hands of an agriculturist the mere transference does not, generally, make any difference to the system of cultivation. The cultivation, in most cases, is still carried on by the old cultivator, now paying a high rental instead of the old interest on his debt. The only difference effected by such a transfer is that the position of the actual cultivator of land becomes more precarious than before, and whatever incentive he might have possessed for cultivating well is entirely lost. For, this process does not mean in India, as it did in most other countries, a consolidation and an enlargement of the unit of cultivation; it merely shows a somewhat altered distribution of the profits of cultivation. Even where there were large compact fields under single ownership they were generally divided into small plots and let out to a number of petty cultivators. If, then, the real unit of cultivation (which in many parts of India differs widely from the average area owned by individual landowners) is to remain a small holding, it must be admitted that a cultivation carried on by the peasant proprietors is vastly preferable to one carried on by cultivating tenants. What made it worse was that in large parts of the country long-term leases were not liked by the landowners and here a larger and larger proportion of tenants was being made merely tenants-at-will.[9] In the absence of a class of enterprising landowners cultivating highly on a large scale, a movement which thus converted peasant proprietors into cultivating tenants was to be deplored. The large class of landless labourers in India was being recruited from the class of tenants-at-will.

[9] N. G. Gangoly, *The Grievances of the Tenantry of Agra* (1915).

It has been said that the increase of indebtedness was due largely to the very small size of the holding. This leads us to the question, now very prominent in India, of the subdivision and fragmentation of land. It has been said over and over again that the size of the average holding in India today is uneconomic. The economic holding has been defined by the Baroda Committee as a holding which can be adequately cultivated by the joint labour of an ordinary cultivating family. It is easy to pick holes in this definition. But, as long as this unit of the family is, more or less, *the* unit of labour available to each cultivator for the cultivation of his plot, the definition seems to be reasonable. Unfortunately the average holding in many parts of India could not profitably employ all the labour of the cultivator's family. The result naturally expected is that a part of this labour would be drawn to other pursuits and thus supplement the earnings of the family. This is so in India wherever such alternative occupations are easily to be found,[1] but in many parts of the country there is no alternative occupation except agricultural labour. The wages of this kind of agricultural labour are—except at harvest time[2]—so extremely low that the addition thus made to the family earnings was very small. The result is that all the labour of the family is spent on the small holding; and yet the total profits from this cultivation are hardly sufficient to support the cultivator and his family. There was another bad feature of this holding; it was not only small but it was scattered. A holding of, say, five acres would be held in numerous strips scattered in all parts of the village.[3] This also contributed to uneconomic cultivation in another way; for, on account of this fragmentation, all the capital available to the cultivator could not be used in the most profitable way.

The Hindu law of inheritance, which provides for an

[1] Dr H. H. Mann, *Land and Labour in a Deccan Village* (No. 1). A large part of the labour of Pimpla Soudagar (the village described) was attracted by workshops, etc., at Kirkee which happened to be near.

[2] But at harvest the cultivator himself would require all the labour of his family.

[3] For the extent of this subdivision and fragmentation see the two surveys by Dr Mann: also G. Keatinge, *Agricultural Progress in Western India*, Appendix I; and H. S. Jevons, *Consolidation of Agricultural Holdings in the United Provinces.*

equal division of the property of the father among all his sons, has been held responsible for this unfortunate movement of subdivision and fragmentation. It will be seen that the movement towards subdivision is really the most harmful. For, even when a consolidation of scattered holdings takes place in the village at any particular time, if the process of subdivision is operating continuously, the evils of fragmentation will reappear after a certain period. This has been generally recognized and most of the legislation recommended for remedying these evils aims at the prevention of this process of subdivision. Even though it may be admitted that the Hindu law of inheritance has contributed largely towards this evil, the main cause must be sought somewhere else. It may be noticed that in prescribing an equal division of the property among all sons the Hindu law is not peculiar. Somewhat similar laws hold good in certain Continental countries. Here also there is an almost similar division of the land among sons provided for; but it has not been found in these countries that subdivision has been carried to the same extent as in India. Take the case of Belgium. This is well known to be a country of small holdings. Here excessive subdivision has been prevented by the practice of holding the property jointly amongst the sons instead of dividing it, while one of them farms it and pays rent for it to the others. 'But for this practice,' says Mr Rowntree, 'the subdivision of property might soon become excessive and unprofitable.'[4] That no such practice is current in India cannot be explained merely by the conservatism or obstinacy of the Indian peasant. As pointed out above, the peasant is quite willing to supplement his earnings by extra work when he can find it. But when no such alternative occupation is available he cannot be blamed if he does not choose to become an entirely landless labourer and insists on his share of the parental holding. Indeed, this is the really important point. But then we are confronted with the cry from many tracts of a scarcity of agricultural labour. Now in the first place, this scarcity is complained of only at harvest time. This is partly due to the fact that the extra labour of the

[4] R. Seebohm Rowntree, *Land and Labour, Lessons from Belgium*, chap. iv, p. 47.

small cultivator and his family, which is largely available at other times, is not available at the harvest. Mr Keatinge puts forward three other reasons for this scarcity.[5] First, the increase in the area under cultivation. Secondly, the growth of city industries. Whether the second reason did really count very much, if we consider India as a whole, must be doubted. In some tracts the supply of labour was affected by the stream of emigration. This was so, especially, in certain parts of the Madras Presidency, from which a considerable supply of labour went to Ceylon and the Straits Settlements. Here social causes played quite an important part in inducing the labourer to emigrate. There is a third reason which Mr Keatinge suggests and which is very important. This is that the substantial farmer nowadays has given up the practice of working in the fields with his family, and works the fields entirely by hired labour, as soon as he can afford it. If this statement held good of the whole of India and if such a movement was widespread, then this alone would account for a very great deal of the scarcity of agricultural labour. However, the existence of a scarcity of agricultural labour at harvest time would not disprove the contention that there were more people working on the land than the land could properly support.

Briefly, three important changes have been pointed out as taking place in the agriculture of India. It cannot be too often emphasized that all these tendencies were operating very slowly; and again that it is impossible to ascertain the extent of their progress. These changes were firstly, a commercialization of agriculture—by itself quite a beneficial movement. For it brought about a slightly better distribution of the crops and increased the profits of cultivation; this was merely the result of the enormously better means of transport. The other two tendencies (i.e. the dispossession of the old proprietors and the excessive subdivision of land) were, however, affecting the ordinary cultivator adversely. The growth of population was an important factor in both these and the absence of a large industrial growth was also largely responsible. The large numbers retained on land affected adversely agricultural movement. Farming on a large

[5] Keatinge, op. cit., chap. viii.

scale would not be undertaken where high rentals ruled and the competition for small plots was very keen. For, as Mr Rowntree rightly points out, in countries where there is a large subdivision of land, its rents and prices are higher than elsewhere.[6] So it was more profitable for the landowner to let out land in small plots than to carry on cultivation on a large scale. How in another way it retarded the progress of improvements will be readily appreciated when we consider that the introduction of machinery in agriculture has been in most countries due to the dearness of agricultural labour.

[6] Rowntree, op. cit., chap. iv.

CHAPTER XII

The Country Artisan

In the old economic structure of India, the position of the country artisan was definitely fixed. Urban handicrafts, though greatly advanced in industrial organization, were numerically unimportant. Thus in old India, the country artisan was numerically by far the most important industrial worker. With the passage of years, this dominant position of the artisan has been lost; but even today [1924], the large bulk of the industrial population of India is formed of country artisans. If the decay in numbers has not been considerable, the loss of status and the old fixed position seems, on the other hand, to have been great, and the rural artisan population today is in a fluid state.

All artisans in the village, however, as pointed out in the first chapter, have not such a fixed position. There was one class of artisans who were village servants and another independent class. The following quotation brings out the difference in status of the two groups very clearly: 'In villages there is a very wide distinction between the village menial and the independent artisan. The carpenter, the blacksmith, the potter, the scavenger—in villages where women are secluded, the washerman—all classes, in fact whose services are required in husbandry or daily domestic life—are paid not by the job but by customary dues consisting of a fixed share of the produce of the fields; and the service they are bound to perform is measured by kind, not by quantity. . . . Those artisans, however, whose services are only occasionally required, such as the weaver, the oilman and the dyer, are paid by the job; not usually indeed by cash, but either in grain or by being allowed to retain a fixed share of the raw material which their employers provide for them to work upon.'[1] This brings out clearly the difference in status between the two groups of artisans. But this difference in status

[1] *Report of Census of Punjab*, p. 307 (1881).

in the village community did not necessarily mean a difference in economic position. The difference between the two groups lay not so much in their economic condition as in the mode of payment and the times of payment for their services. There was an obvious advantage to the former group, in that their income was a fixed and a steady one, but it is doubtful how far this was a real advantage. It is true that, in case of a failure of the harvest, the village weaver or dyer would get no orders and would have to starve; but the case of the menial classes was not much better, for the failure of a harvest would very considerably reduce their share of the produce. In fact, the distinction between the two groups was made merely for the sake of convenience, and the prosperity of all the village artisans depended intimately on the prosperity of the cultivators. The fortunes of the whole village depended on the one important fact—the nature of the agricultural season.

While all the artisans were not included in the village servant group the village servant group itself was not composed only of artisans. There was also a combination of occupations in some cases, so that it was difficult to say who was a pure artisan. Take the *mahar* of the Maratha country. His position was that of the village watchman; as such, he had perhaps a small plot of land, but he mostly lived on the village dues, and was one of the first recruits to the landless labour class. He had apparently none of the characteristics of an artisan; yet over large tracts the *mahar* was also a weaver of coarse cloth. The potter was a true artisan, but because in many parts of the country his craft necessitated his keeping a donkey, he also became the general carrier for the village; the leather worker, again, was often found to be partly a day-labourer. In spite of these difficulties three distinct groups can be made in the village population outside agriculturists pure and simple. The highest stratum among them, socially and economically, was composed of the priest and the accountant; next came the artisan group, comprising chiefly the blacksmith, the carpenter, the oilman, the weaver, the potter and the shoemaker. Lastly came village servants, such as watchmen, scavengers, etc., who formed the unskilled labour class—their small plots of land,

wherever they possessed them, being insufficient for their needs. They were mostly labourers, though they occasionally combined this with occupations like coarse weaving, basket-making or mat-making.

The changes which have come over this structure during this period of more than half a century do not appear to have been enormous. Most of the old artisans today are paid dues;[2] the payments for the jobs today are still mostly in kind. The village today possesses the same equipment of artisans as before. The change then, whatever its nature or extent, has not been revolutionary. But the direction of the change is definite. The tendency has not been towards the abolition of the dues and services outright; but the customary dues are now playing a much less important part in the income of the artisan than they used to. The same holds good as regards the plot of land that the hereditary artisan held. Its importance, too, has diminished. Again the artisan has become today more ready to migrate. All these are signs of a dissolution of the bonds which once held the community close together. The slow decay in importance of the *panchayat*—the assembly of village elders—had prepared the ground a good deal for the loosening of these bonds; but with easy communications and the possibility of getting, outside the village, things which before this time had to be got in the village itself, the necessity of keeping all the artisans in the village was less felt. This did not mean that their services were at once dispensed with; but it materially helped the movement towards payment of the artisans for a job done rather than for a yearly service. The share of the harvest slowly sank in importance, and payment by jobs began largely to take its place. The transition is not complete yet. Ease of communications also contributed to the process of at least a partial movement towards concentration of certain artisans in the larger villages and towns. For now that a commodity, for whose supply the villager could afford to wait for the weekly market, could be brought to the village from outside, the presence of the artisan himself was

[2] 'The carpenter, the blacksmith, the washerman, the barber, the potter, etc., still exist as village servants with recognized duties and remuneration.' J. T. Marten, *Report of Census of Central Provinces* (1911).

not required on the spot. The two factors, then, that governed this movement towards a partial concentration of artisans were (1) the urgency of the peasant's requirements, (2) facility of carriage. On both these counts, the presence of the blacksmith and the carpenter was required in the village. Either of them might be required to repair an agricultural implement at any moment. The potter's wares again could not be brought from a distance, as they were extremely fragile. The leather-worker's presence was especially necessary in those parts in which well-irrigation and leather buckets were common. Of all these artisans, the weaver was least required from this point of view. The demand for cloth could be put off for the time being, and the weaver's products could also be easily carried from a distant market. Thus we find the weaver the first among the class of artisans who showed any signs of concentration in bigger centres. The dyer was in the same boat; in fact it was not uncommon for the weaver to be a dyer also. The goldsmith is another case in point. Except in tracts where they were also the village moneylenders, this tendency towards concentration is specially marked in the case of goldsmiths.[3]

Apart from this tendency towards concentration of artisans as a result of easier communications, there were two others which were bringing about a change in the above class of artisans. Both were manifest in all those cases where the industry was in a depressed condition on account of foreign competition or other reasons. These tendencies were for the artisan, driven out of his occupation, to join the ranks of the day-labourer, or to migrate to towns in search of employment. The extent of this migration to towns was, however, very limited. The ranks of day-labourers were most naturally recruited from the lowest strata of village menials, but very many of the artisan classes were also driven into them. Lastly, there were also many artisans, who, as soon as they had slightly improved their position, gave up their hereditary occupations and took to agriculture. This was partly

[3] The *Punjab Census Report* for 1901 mentions that on account of the uncertainty in the value of precious metal, which is unfavourable to the goldsmith in the smaller villages, there is a tendency for the wealthier goldsmiths to migrate to towns situated on railway lines.

the result of certain social forces working in the community. Such were the directions which the artisans who were thrown out of their occupations took. As regards those who kept their hereditary occupation, there was little change in their position. Their organization, or rather the lack of it, and their methods of working, were yet unchanged; and if in places their dues had dwindled, they were still paid by the job, in kind, and their income remained almost stationary. Only those who began to be concentrated in the bigger villages improved the organization of their industry during the process. The organization and the economic position of the village industry were then, during this period, very little changed. The variations in the fortunes of individual groups were, on the other hand, sometimes violent. It is, therefore, necessary to examine the condition of a few prominent classes of artisans separately.

The blacksmith and the carpenter may be considered first. There was a great similarity between these two groups of artisans, and in many parts of India their occupations were interchangeable. They were both essential for agricultural purposes; for their chief work was the preparation and repair of agricultural implements. The work of the village blacksmith had always been reported to be crude, and one of the difficulties in the introduction of improved implements had been his inability to repair them. The only articles, other than agricultural implements that he made, were certain articles of domestic use and tools for other artisans. The position of the village blacksmith was not much affected by any outside factors. He had never produced a great deal of original work and had chiefly confined himself to repairs, for which the demand was pretty steady. On the other hand the demand for the village blacksmith was not an increasing one either, whereas in the towns industries requiring the services of a blacksmith were increasing. For example, there was the development of cutlery trades in north India, and the growth of engineering workshops and iron foundries almost all over India.[4] It is not clear whether there was any movement of the village black-

[4] *Monographs on Iron and Steel Industries in Bengal, United Provinces and Punjab.*

smith to the towns to satisfy this demand, but in any case it could not have been considerable. Whenever he did go to the towns, he definitely improved his position. The blacksmith may be said to have been more or less in a stationary condition throughout the period, except the urban blacksmith, who improved his position. Naturally, however, with other village artisans, he was beginning to work more and more for the job. It must at the same time be pointed out that the demand for his services was not increasing, and any increase in the number of village blacksmiths would have to be met by the flow of a certain proportion to other occupations.

The carpenter held a similar position in the village community. But he did less repair and more original work than the blacksmith. Here his position became worse. The introduction of the iron cane-crushing press, for example, undermined very greatly his position in the sugarcane-growing tracts. The same may be said of the introduction of the iron plough; but as this movement was not very general, the effect cannot have been widely felt. Wherever, indeed, improved machinery was coming into use in agricultural operations, the position of the carpenter was becoming less secure. Thus the *Bengal Census Report* for 1901 puts carpenters among the class of rapidly decaying village artisans. If the village carpenter migrated to the towns, his chances were quite good. The general activity in the building trades, in coach and carriage making and in the small furniture industries in the towns was creating quite a brisk demand for carpenters.[5] External competition with the carpenter was not direct but rather indirect. Thus while in certain tracts he was rapidly losing ground, in others his position was stationary. But in the towns both blacksmiths and carpenters had a good chance of improving their position. It must be remembered in both these cases that the extent of the town industry was strictly limited.

The potter was perhaps the poorest of the artisan group. The wares he made were the cheapest of all the products of village industry. His working capital was very small. The

5 A. C. Chatterjee, *Notes on Industries in the United Provinces*, chap. iii (1908).

potter's was a decaying class of village artisans, and everywhere the numbers in the industry were decreasing.[6] The external forces making for a decline in this industry were the competition with the potter's wares of the products of the Indian brass and copperware industry and the imported cheap enamelled ware. There was a small pottery factory industry in India but its products were greatly superior and did not compete with the village potter. The competition of the brass and copperware industry affected the potter in his better class of customers. The substantial cultivator was rapidly giving up the use of earthen vessels for domestic use, and taking to brass and copper wares instead. It is doubtful, however, how far the enamelled iron ware had entered the villages. Yet the demand of the poorer classes remained steady. For the potter there was no alternative to migration to the towns, as there was for the carpenter or the blacksmith, and a potter thrown out of his hereditary occupation had to take to ordinary agricultural labour.

The village tanner was perhaps the hardest hit of all the village artisans. His position began rapidly to deteriorate after the extraordinary rise in the world prices of raw hides and skins. The fact that in many parts the hides of dead cattle were his perquisite did not help him much. Wherever he had to buy his raw materials in the village, his position was most unfortunate. For here the agent of the exporter or of the city tanneries, e.g., from Cawnpore, Bombay or Ahmedabad, was easily able to outbid him. The case of the tanner showed most clearly that the bonds of custom were not strong enough to withstand economic forces. As long as the hides had not acquired a substantial value, people gave them away as perquisites. But towards the beginning of the twentieth century, as for example in the Central Provinces, they began violently to dispute this right to dead cattle. On this Mr Marten remarks: 'That the communal system is gradually giving away before the growth of individualism is shown by the change in the view of the cultivators towards the question of the hides of dead animals which used to be

[6] Bombay, *Monograph on Pottery and Glasswork*. C. E. Low, *Report on the Industrial Survey of the Central Provinces and Berar*, chap. iv (1910). Also Chatterjee, op. cit., chap. xiv.

the perquisite of the *mahar* and *chamar* communities."[7] There was a similar instance in the Madras Presidency. 'Here the *madigas* (tanners) are attached to one or two families of ryots and are entitled to the dead animals of the houses.' But 'of late years there is a tendency observable among the *madigas* to poach on each other's monopoly and among the ryots themselves to dispense with the services of the family *madigas* and to resort to the open market for their necessaries. In such cases the ryots demand payment from the *madigas* for the skins of their dead animals.'[8] These instances show that the bond of custom was only slight. The dues were paid and the services rendered so long as they were not irksome or expensive. This great increase in the prices of raw hides and skins reduced the country tanner to a very bad condition, and large numbers of his community were driven to agricultural labour, while a few were absorbed by the urban tanning industry. The decline of the village tanner was perhaps the most remarkable of all.

The oilman was not a village servant; he was to be found throughout India. As in almost all village industries, the cultivator gave the oilman the raw materials, in this case the oil-seeds, and had the oil crushed by him. The two most important uses of oil in India were (1) as an illuminant, (2) for culinary purposes. The importation and the increasing use of mineral oil, therefore, made the position of the oilman very precarious. The use of kerosene for lighting purposes spread rapidly all over India, and thus took away from the oilman a very important part of his business. This decay may be said to have begun about 1880. The export of oil-seeds from India and the growth of an oil-pressing industry in the towns did not, however, greatly affect the position of the oilman. For the oil-seeds were supplied to him by each individual cultivator; and the urban industry was as yet very small in its extent, and had not even captured the urban markets completely; it could not have any effect, therefore, on the village oilman. The decrease in the number of oilmen due to the introduction of kerosene must, however, have been considerable.

[7] *Report of the Census of the Central Provinces* (1911).
[8] Chatterton, Monograph, *Leather and Tanning*, Madras.

The country dyer was to be found in all villages of a fair size. Dyeing according to the old Indian method involved very complicated processes, and the dyer had to possess a considerable degree of skill. The competition of foreign goods was, in this case, an important factor. Aniline dyes were introduced into India about 1870. They were at first of a very fleeting quality and greatly inferior to the Indian dyes. But they had two important advantages. They were cheap and they were very easy to use. Their spread in India was therefore rapid, and by 1890 Indian dyes had almost completely gone out of use. The facility with which these dyes could be used had the effect of diminishing the demand for dyers. For people began to use the dyes themselves. But the real harm done to the dyer class in India by these imports was that they made the dyer's intimate knowledge of the processes of using the vegetable dyes worthless, and lowered the importance of the industry. Mr Fawcett says: 'the truth is that the introduction of cheap aniline and alizarine dyes into India has had the effect of throwing open the industry to all who care to take it up, as dyeing does not now require the special study and knowledge which was necessary when the native ingredients were used.'[9] This made the competition in the industry very keen and cut the profits very low; and the industry, ever since the introduction of foreign dyes, has declined rapidly. The production in mills of dyed yarn had also an adverse effect on the industry, as the weaver often bought the dyed yarn direct instead of getting the cloth dyed. The decay of the industry was further hastened by the fact that most of the dyers did not get the best even out of the aniline dyes they used. A small movement to organize the industry in factories was started in Madura and other places; but except in Madura it did not meet with much success.

The dyeing industry and its prosperity are very closely connected with the cotton handloom weaving industry. The handloom industry is the biggest and the most widely spread in India. It is not surprising, therefore, to find that it has received a great deal of attention of late years. At the same time cotton weaving is a good deal more localized than most

[9] Monograph, *Dyes and Dyeing*, Bombay.

other country industries. There are colonies of weavers in most towns and big villages of India. Nevertheless there are usually weavers to be found in most villages also. There is at present a difference of opinion as to whether the industry is a decaying one or not. There seems to be every reason to think that for many years after 1850 it did decay fairly rapidly, the decline being especially marked in the industry connected with the production of the finer kinds of goods. Dr Watson's remarks on the commercial importance of the different products of the Indian loom are interesting. He says: 'There are certain fabrics which will probably be best and most cheaply manufactured by hand . . . the native looms will continue to yield the embroideries, the shawls, the carpets for which they are already so famous.' But even more interesting are his remarks about the coarse cloths. 'The thicker materials are more durable as well as warm; of their commercial importance as a class evidence is afforded by the fact that during the recent cotton famine in England and consequent rise in price of raw material the native goods retained their position more firmly than the English ones did, though the price of the former rose to a greater extent than did the price of the European.'[1] Thus there were two classes of goods, the embroidered and other finer goods, in which the handloom had a peculiar advantage, and the coarser kinds, which ideally supplied the demands of the common cultivators, where the cotton handloom industry of India held its own. Between these two was the large class of less fine goods and medium count goods in which the competition of the mill industry, whether Indian or foreign, was able to beat the handloom industry decisively. That is the whole history of the competition, but it cannot definitely be said during what period the industry decayed and when this process was stopped. Again the periods differed from one part of the country to another, for though Bengal was affected by foreign competition in the earlier part of the nineteenth century the Central Provinces industry was not touched till after the sixties. But it seems that though the periods might differ, a stage had been reached

[1] Watson, *Textile Manufactures, etc., of India* (1867).

in the history of the handloom industry in all parts of India, at one time or another, when the mill industry had captured as great a portion of the market between the two limits as it could. At this point a sort of equilibrium was attained, and after this the decay of the handloom industry, if any, has been very slow. We will proceed to illustrate this proposition. There have been two attempts made in the Madras Presidency to measure statistically the variation in the handloom industry.[2] The Census Commissioner in 1891 came to the conclusion that there were no definite grounds for believing that the numbers in the industry were declining; while in 1911 Mr Chatterton decided that there had been no decrease in the number of weavers in the Presidency during the last forty years, i.e., 1871-1911. As regards Bombay, Mr Enthoven writes in 1895; 'Probably the number of persons relying for their livelihood on weaving had decreased considerably of late years;' but adds later on, 'in the case of handlooms the effects of foreign competition have already been fully experienced'; and concludes, 'there is no reason to hold that the industry will undergo any further considerable reductions.'[3] The same conclusion is more emphatically stated by Mr Mehta: 'It may be safe to assume that, if the handloom industry has not increased, it certainly cannot have decreased of late years.'[4] Mr Silberrad, writing about the United Provinces industry in 1898, said that the industry had certainly declined, but that during the last ten or twelve years the rate of decrease had considerably lessened.[5] In Bengal there were found to be clear indications of a decline, though here also a few of the very fine manufactures and the coarse cloth industry were holding their own.[6] While by another estimate, 'there was a continuous decline till about 1904, since when a new impetus had been given

[2] *Reports on the Census of Madras Presidency* (1891 and 1911). For a statistical examination of the whole question see Appendix I to the *Report of the Industrial Commission*. The conclusion is that since the beginning of this century there has been some decline in the number of coarse weavers, while the number of weavers producing the finer goods has, on the other hand, increased.

[3] Enthoven, Monograph, *Cotton Fabrics* (Bombay 1895).

[4] P. N. Mehta, *Report on the Hand Loom Industry* (1909).

[5] Silberrad, Monograph, *Cotton Fabrics*, N.-W. Provinces.

[6] Bannerjee, Monograph, *Cotton Fabrics*, Bengal (1898).

to the industry,'[7] a conclusion which is confirmed by an estimate for Eastern Bengal.[8] For the Punjab, in the latest survey, that by Mr Latifi, no attempt is made to estimate the rate of progress or decay,[9] but Mr Francis in 1884 thought that 'notwithstanding the competition of Manchester the Punjabi weaver's trade is rather extending than diminishing'.[1] About the industry in the same province in 1901 the *Census Report* says: 'The general opinion is that the manufacture of country cloth in the villages has not been seriously affected.' Only from the Central Provinces is a continuous and all-round decay reported.[2] As was to be expected, the evidence is certainly not uniform, but on the whole it lends support to the theory that at a certain stage a point of equilibrium was reached in the competition between the two industries. The evidence also indicates that, over large parts of the country, this point was reached towards the end of the last century.[3]

Though the decline in the number of weavers in the later period was not considerable, it must have been very large when the competition started. The position of weavers also had perhaps worsened a little, though this was not possible in any large degree, because their position was already extremely bad at the beginning of the nineteenth century. The real decrease in the industry must have taken place in the country; the urban weaver, or the weaver wherever he was to be found in fairly considerable numbers, was, on the commercial side at least, fairly well organized. Also he had no other occupation, and was very tenacious of his craft, though it might not pay him at all. The country weaver was also partly a labourer or an agriculturist. It was, therefore, this class of weavers that was declining in numbers. Together with the tendency of the handloom weaver towards

[7] J. G. Cumming, *Review of the Industrial Position and Prospects of Bengal* (1908).

[8] G. N. Gupta, *Industries and Resources of E. Bengal and Assam* (1908).

[9] A. Latifi, *Industrial Punjab* (1911).

[1] Francis, Monograph, *Cotton Fabrics*, Punjab.

[2] C. E. Low, op. cit.

[3] The extent of the industry can be gauged from the fact that in Sir V. Thackersay's opinion the industry consumed double the quantity of yarn consumed in the Indian mill industry. Cf. the paper read before the First Indian Industrial Conference (1905); also Graham-Clarke, op. cit.

a further concentration was also noticed this tendency of the rural weaver towards either completely giving up weaving or taking it up completely.[4]

The village industry, then, was not in a flourishing state. The only two important classes of artisans, who were tolerably well-off and were not greatly affected by foreign competition, were the blacksmiths and the carpenters.[5] This was so, largely because the existence of these artisans in every village was peculiarly necessary in the existing condition of the methods of cultivation. Most of the other groups of artisans were in a bad condition and their numbers decaying. In the matter of alternative occupations, also, it was only the blacksmith and the carpenter class who had a fair chance in the towns of earning a living in their particular occupations. For other artisans, driven out of their occupations, unskilled general labour was the only alternative.

Any definite account of the status of the artisans in the village is hard to obtain. The system generally is a great deal too loose now. With the gradual disappearance of grain rents, dues at the harvest time must also have a tendency to diminish or to disappear altogether. It is not easy to say in what parts the custom has completely died out and when. An account of its gradual disappearance is not available. The fact is noted only when the custom has wholly disappeared. Thus we read about the *dhers* of Bombay Presidency: 'In villages they keep in order the water bag or "mot". For this they were formerly paid at harvest time; but the custom now seems to have died out.'[6] In the 1881 *Census Report* the village community is shown everywhere as almost intact, but even here forces making towards a loosening of bonds are noticed.[7] In many parts the system

[4] The cotton spinning rural industry was almost extinct by the end of the nineteenth century. Very rarely it was still followed by the aged women of the weaver's household; but mostly wherever it remained it was to be found in the towns. Its existence and also its terribly sweated condition here were both the result of certain social forces. For it was one of the very few industries that *parda nashin,* secluded women, could respectably follow. See Hoey, op. cit.; also A. C. Chatterjee, op. cit.

[5] G. N. Gupta, op. cit.

[6] Martin, Monograph, *Leather, etc., Bombay* (1903).

[7] See especially Mr Baine's notes on the village community in the *Bombay Census Report* (1881).

was quite sound even in 1911; but cases like that of the tanner show that it was liable to break down at any moment. At the same time, there was no upheaval, and the process of change was extremely slow. For example, even where the share of the harvest disappeared, the perquisite given at the annual festivals, at marriage ceremonies, etc., remained. The point to be emphasized is that almost everywhere the tendency was for the regular income of the artisan from the dues and the perquisites, etc., to diminish steadily in importance. This made him more ready to take to other occupations. This point being reached, the other tendencies entered which have been sketched above. The only one that needs further comment is the tendency of those artisans, who were in a position to do so, to take wholly to agriculture. The reasons for this are obvious. The profits of most village industries were extremely small, and the best chance of the artisan to improve his position lay in the practice of agriculture. For village industries were far from steadily improving their position. Again, agriculture was considered to be a much more respectable occupation than any of the artisan industries.

The growth in the numbers of those for whom there was no longer any place in their hereditary industry was shown by the increasing diversity between the caste and occupation statistics. These statistics generally indicate that artisans were giving up their occupations for agriculture or ordinary labour. But certain factors, such as the fact that the caste occupation was by many returned as their actual occupation, even though they might be following it no longer, or that sometimes in an artisan industry people outside its particular caste were also to be found working, make these statistics unreliable for a comparison between the different village industries.

Lastly may be considered the effect of famines on artisans. Materially, artisans were on much the same level as the ordinary labourer; some of them indeed, the weaver for example, were much below this level. Thus the village artisan, together with the lower village menial and the agricultural daylabourer, was the first to seek relief in famine times. Of all

classes the weaver came the earliest.[8] He also suffered most on account of this compulsory abandonment of his occupation. For on the relief work all were employed on rough manual work. The carpenters, the blacksmiths, the masons might sometimes get employment in their own trade, but for others there was no such hope. The weavers, unused entirely to manual work, suffered most. Many of them lost their skill during this period and it was hard for them to take to their occupation again. The effect is described thus by the Famine Commissioners (1896): 'In the absence of extraneous aid, many weavers are obliged under the stress of the famine to fall off from their own trade; and of these a considerable number never return to it, but sink into and swell the ranks of ordinary labourers.'[9] A similar effect was to be seen on the other artisans also, though not in such a marked degree as on the weavers.

Village industry was a decaying industry. Large numbers of those thrown out took to ordinary labour, while a fortunate few were absorbed in industry in the towns; some also took to agriculture, while for the rest, i.e., those who still retained their hereditary occupations, they remained what they always were, a poverty-stricken class abnormally sensitive to the variations of the seasons.

[8] *Famine Commission*, Minutes of Evidence (1880). Evidence on classes of rural and urban population first affected.

[9] *Report of the Famine Commission*, chap. vi. sec. iv (1896). Some successful experiments were carried out in some parts especially in 1899-1900 at relieving weavers through their own trade. For details and results of the experiments conducted by the Nagpur Municipality, see *Famine Commission* (1901), Minutes of Evidence: evidence of Rao Bahadurs Bhargo Rao and Bapu Rao Dada.

CHAPTER XIII

The Organization of Urban Industry

Of the different forms of industry in India the only one that reflected the impact of new outside forces, by a continuous change in its organization, was the indigenous urban handicraft. The plantation and the factory were forms which had been introduced, in an already highly developed form, from outside India. Of the indigenous industries the village industry had merely decayed under the pressure of the new forces. Its organization still remained primitive. It was that of an artisan working, in most cases, on raw materials supplied to him by his customer and being paid in cash or kind for his services. It was what Bucher termed wage-work.[1] The only important change that took place in the organization of village industry was in the way the payments were for the services of the artisan. In all other respects—in the lack of capital of the artisan, or in the semi-agricultural position of the artisan—it showed no change.

Urban industry, on the other hand, in all those crafts in which it still flourished, showed a distinct change in its organization. Thus it is the only form of industry in which the effects of these new forces can be studied. All the crafts, indeed, declined in artistic importance throughout the period; but many, for which the old demand still remained —e.g. gold and silver work, cotton and silk fabrics, brass and copper ware, etc.—or for which a new demand was found—e.g. the carpet industry—still retained some of their commercial importance. Another well-marked tendency was the abandonment of the highest class of products and the production of cheaper kinds of wares. This was specially noticeable in crafts like wood-carving, ivory-carving, artistic working in metals, etc. This was a natural result of a change in the character of the demand. These artistic industries which once

[1] C. Bucher, *Industrial Evolution*, trans. by S. M. Wickett, chap. iv.

depended on the demand of the courts were now dependent on a more popular demand.

The chief feature that distinguished urban from village industry was the presence of a capitalist.[2] Even when the industry was composed of independent artisans they needed credit in one form or another. This credit, in the first instance, was provided by the dealer in the raw materials of the industry. Thus in the initial stages of industrial organization the dealer in ornamental wood or ivory supplied the raw materials to the worker; but he had nothing to do with the disposal of the finished product. The next stage was when the dealer in the raw materials also bought from the craftsman the finished goods and put them on the market; the next, when the dealer gave out the raw materials and paid a piece-work wage to the artisan for working them up. The last stage was reached when the workers were brought together under one roof—whether called a workshop or a small factory—by the capitalist. All these various forms are to be found in the urban industry of India today. Sometimes all of them are found existing in the same industry.

The handloom weaving industry, being the most important and widespread of all Indian handicrafts, is perhaps the best in which to observe the various changes. The earliest stage is that of the independent weaver working generally in ordinary coarse cloth, and disposing of his wares locally. He has almost no capital and can only buy small amounts of yarn from the local dealer. Every time he has to work it up, and he must be able to sell his finished product before he can buy another instalment of yarn. In some places he buys yarn outright[3] but in others he buys it on credit. This is the first introduction of the middleman, in most cases the yarn dealer. The yarn dealer charges interest on this credit

[2] Pure 'wage-work' was also to be found in the towns. For example, when a person wanted carving or other wood-work done in his house, he merely employed a wood-carver paying him a piece-work wage. This system was most prevalent in ornament making. Here the raw materials were almost invariably provided by the customer and the goldsmith was paid a piece-work wage. Of late years, however, the practice of buying ready-made ornaments has been spreading slowly.

[3] P. N. Mehta, *Report on Handloom Weaving, etc.* Also Chatterjee, op. cit., chap. i: 'The Nagina weaver does not take an advance of yarn from the dealer but purchases it outright, keeping a running account with him.'

but has nothing to do with the disposal of the finished product. These stages of organization are found generally in the small centres of industry and only in the coarse-cloth trade. The reason for the independent weaver restricting himself to the coarse products is obvious. If the weaver has to dispose of his products himself the market must be a fairly steady one and must also be near the weaver. The weaver in the village centres generally resorted to the country market or fair where he could easily dispose of his products; sometimes even here the necessity of an intermediary between the buyer and the seller was felt, and Bannerjee mentions that in some country fairs, brokers were to be found who brought the weaver and his customer together.[4] Generally speaking, however, the weaver and the customer could come together only in such weekly markets and fairs. The independent weaver had only a small quantity to sell at each time and it was necessary for him that he should sell it at once. The demand for the finer fabrics was largely a seasonal one in India and therefore the independent weaver had no secure place in this branch of the industry. In the large centres, again, where the trade in cloth was well organized, there was little chance of the weaver meeting the customer directly. Therefore, the independent weaver was not to be found in large numbers here.

The position of the independent weaver was very precarious. Mr Mehta estimates that only about twenty-five per cent of the total number of weavers belonged to this class. For a failure to sell his products for any considerable time was bound to drive him into debt. When he once became indebted he could no longer wait to sell his cloth directly to the customer but sold it to a middleman who would give him a return immediately. Sometimes the yarn dealer and the cloth merchant were two different persons,[5] but in most cases they were the same. Indeed the yarn dealer was almost compelled, in many cases, to become also a dealer in cloth.[6] For the weaver was generally indebted to him and in case

[4] Monograph, *Cotton Fabrics*, Bengal.

[5] Low, *Report on the Industrial Survey of the Central Provinces and Berar*, chap. iii (1910).

[6] A. R. Brown, 'Economic Conditions of the Weavers of Bankura', *Bengal Economic Journal* (January, 1917).

of failure to sell his products, the only thing that the weaver could offer him in satisfaction of the debt was the cloth itself. The cloth was the yarn dealer's only security and so he generally combined dealing in yarn with dealing in cloth. This system, in which the weavers bought yarn on credit and then sold the cloth back to the yarn dealer, must be clearly distinguished from the system in which the weaver worked for the dealer for a piece-work wage. In numbers of cases, where the yarn dealer and the cloth dealer were the same person, the dealer, instead of charging interest on the credit of yarn, stipulated beforehand that the weaver should sell him the finished goods at a certain price. In the ordinary handloom industry, weavers in this condition formed a large proportion of the total. They were, of course, very badly off; for the margin of profit taken at both ends by the dealer was very large and left them little more than a bare subsistence wage. But they were, at least partially, independent. When the weaver became very heavily indebted to the dealer even this independence was lost. He had to pledge his loom to his creditor and work for him on piece-work wages. Thus in most centres there would be a few prominent dealers for whom nearly half of the total population of weavers would be working for wages. When the weaver had, in this manner, lost his independence he had no chance of regaining it. Thus in most centres of the industry, the two kinds of weavers—the independent artisan and the artisan working for wages for a capitalist—existed side by side. But in certain branches of the industry the independent artisan had disappeared altogether. This was the case where the market for the products was far removed from the centre of the industry and where the raw materials were rather costly. In such cases the 'house industry' or the 'commission industry' was fully developed. A typical case of this kind was the Coimbatore industry in the finer textiles. The market for the goods of this industry was in the Maratha country, which was at a great distance from Coimbatore itself. The trade was concentrated in the hands of a small number of traders. The weaver, generally, got a fixed amount of yarn or silk and gold-thread (the industry was in bordered cloth) from the trader and received his

wages on turning them into finished articles. The weavers in this industry were always attached to one of the traders. The weavers, of course, worked in their own houses on their own looms.[7] Thus in an industry with a specialized demand the weavers worked entirely to the order of the middleman. Some weavers were so reduced in circumstances that they had even lost their looms. These were called 'cooly weavers'. They worked in the houses of the richer class of independent weavers who happened to possess more looms than would employ the members of their family. On an average there was only one loom in each weaver's house, but the small class of rich weavers possessed sometimes as many as five or six looms. They then employed these 'cooly weavers' to work the extra looms. It is to be noticed that in the Coimbatore industry even the weavers possessing five or six looms worked only to the orders of traders. In many places weavers possessing a large number of looms and employing cooly labour on them also financed other weavers to a certain extent.

The entirely independent artisan weaver was only to be found in the village or the small town industry. Mr Mehta remarks: 'All weavers working on the artisan system are more or less connected with the soil.'[8] The semi-independent artisan also was only found in the coarse-cloth industry of the large towns. But the domestic system came in as soon as the weaving of finer goods was introduced. The independent weaver was too poor to buy silk, gold-thread or the other costly raw materials. Even in the smaller centres or in villages, where finer goods were produced, the weaver generally worked to the order of the local moneylender. The cooly weaver, on the other hand, was found in most places, and was very prominent in the larger centres.

In many branches of the handloom cotton industry, the introduction of a factory system was not possible. For wherever the demand is certain domestic industry has one great advantage for the capitalist over the factory system; this is that he can stop orders in a slack time without any

[7] Evidence of Mr N. G. Chatteyar: Minutes of Evidence, *Industrial Commission*, vol. III (1916-18).

[8] Mehta, op. cit.

great loss to himself. In other cases, where the demand is fairly stable, the introduction of a factory system in the handloom industry has been tried but has failed. The reasons usually given for this failure are the difficulty of persuading the weaver to attend the factory regularly and the loss of the labour of the weaver's family when he leaves his home for the factory.[9] The second reason is certainly an important one. But the main reason seems to be this: that the economies effected by a factory organization of the handloom industry are not large enough to make it profitable to the capitalist to pay a substantially higher wage than what the weaver already earns on the domestic system. For any economies to be gained by an improvement in the handloom, such as the introduction of the fly-shuttle, could as well be introduced while the weaver is working at home. The economies, then, could not be very large and therefore the extra wage necessary to induce the weaver to leave his home and to keep him regularly at work in a factory, could not be offered by the capitalist. The commission or domestic system, therefore, was gaining ground and was the predominant form of organization in the industry.

The organization of the silk-weaving industry was, as was to be expected, similar to that of the better class of cotton goods. The raw material being very costly the weaver was working entirely for the dealer. The Madras monograph describing the organization at Berhampur says: 'Most of the weavers, especially in the case of the more valuable cloth, work for merchants, on the piece-work system.'[1] The Bombay monograph records the growth of the process by which the weaver became more and more dependent on the dealer. Here also the new dominant type is the same. 'The merchant advances small sums of money, provides the silk and buys the fabric from the weaver at a large profit to himself.'[2]

The brass and copper ware industry was one which was never very widely spread in rural India. It had always been primarily an urban industry; but since the beginning of

[9] Evidence of Rao Bahadur P. Theagaraya Chetty, op. cit., vol. III.
[1] Thurston, Monograph, *Silk Fabrics*, Madras (1899).
[2] Edwardes, Monograph, *Silk Fabrics*, Bombay (1900).

this period it had begun to concentrate in big towns to an even greater degree than before. The different forms of organization found in this industry were the independent artisan, the master-worker with one or two assistants, and the workshop. The two former were predominant in the smaller towns. The industry was a flourishing one and the demand for its products was very large. Differentiation and specialization of operations were proceeding at a rapid rate and machinery was being slowly introduced. All this resulted in a movement towards the concentration of the industry in a few big towns, and the workshop was becoming the typical form of organization. In many of the larger towns workshops employing as many as twenty or more persons were to be found.[3] This industry provides a sharp contrast to cotton handloom weaving. The handloom was worked essentially by one man and the different operations could not be split up. In the brass and copper ware industry, on the other hand, the processes were very varied and the work was split into a number of different operations, for each of which a specialized workman could profitably be introduced. The introduction of small machinery for certain simple operations was also possible. Therefore, an organization which could bring a set of specialized workers together and which, on account of a larger unit, allowed the use of machinery in simple processes, effected a great saving and was bound to spread.

The wire and tinsel industry (or rather the gold and silver thread industry) offered an even more marked case of specialization of the different operations. Here it was necessary that the raw material should pass through the hands of a number of different sets of workers before being turned into a finished product. The independent artisan had, therefore, no place in the industry; 'at every stage it is the dealer who gives out the material and receives back the product'.[4] The classes of dealers differed; in the United Provinces they were generally the embroidery merchants, from whom the demand chiefly came. Production by

[3] Dampier, Monograph, *Brass and Copperware,* North-West Provinces (1899).

[4] Nissim, Monograph, *Wire and Tinsel,* Bombay (1909).

machines was said to be very much inferior to production by hand. But the competition of cheap imported German articles had been rapidly undermining the position of the industry since the beginning of this century; and for its own protection it had to adopt machinery and turn out cheap articles. This, however, was not the case everywhere. The only widely spread use of machinery was to be found in Bombay and the Gujerat towns, and it was here only that the industry was able to hold its own against foreign competition. As soon as machinery was introduced, the organization, of course, conformed to the factory type.

The carpet industry was the only urban handicraft which had a considerable foreign market. In fact, most of the woollen pile carpets made in India were for export. This was entirely a cheap carpet industry. The only two important centres of the industry were Mirzapur and Amritsar. The organization at these two centres differed somewhat. At Mirzapur the industry was scattered in the villages round the town, and in the town itself there were very few carpet-weavers. The exporting firms entirely controlled the trade, but they did not deal directly with the actual weavers. They dealt with the owners of the looms, who engaged their own weavers and other workers. The firms gave advances to the loom-owners and these in turn gave advances to the weavers. The weaver in most cases was heavily in debt to the loom-owner, and the loom-owner, taking advantage of this, did not supply the weaver with regular work. For it was evidently to the advantage of the owner to have a large number of weavers attached to himself in case of increased demand. Here again, the organization was the commission or the domestic system.[5] At Amritsar, on the other hand, the industry was centred in the town itself. The exporting firms, who were also the producers, controlled it. Mr Latimer says that this was entirely a factory industry; but the organization is not quite a factory organization. For, within the factory, the work was given out to master-weavers who employed their own workmen. The master-weaver generally made a handsome profit, but sometimes his contract with the

[5] Kunwar Jagdish Prasad, Monograph, *Carpet Weaving*, United Provinces (1907).

firm might turn out unprofitable for him. Thus he was in no sense a wage-worker like the foreman in a factory, but actually bore a good part of the risks of production.

We have seen that all the stages of industrial organization existed side by side in the industry evolved out of the urban handicrafts of India. The main changes that had occurred during this period were the widening of markets for all industries and the introduction of outside competition. The widening of the markets had everywhere the effect of a greater localization of industries and also a greater specialization within them. We have seen in a former chapter that the villager, as yet, consumed very few products of outside industries, and thus all these tendencies were most marked in the somewhat higher kinds of industries. The increase in the production of the finer class of cotton goods and a greater specialization in the different towns—especially in the Madras Presidency—was a result of the forces which had converted the whole of India into one market for the finer textiles. The natural consequence of a wider demand for the products of the industry was the divorce of the direct connexion between the actual producer and the consumer. Such a divorce made the middleman's presence inevitable. The artisan's lack of capital, together with this factor, brought about the loss of his independence by the artisan. Foreign competition, wherever it was not too overwhelming, generally had the effect of compelling the capitalist to give up antiquated methods and introduce new ones. Almost everywhere, it further depressed the artisan and strengthened the hands of the middleman.

Where little capital was required and the consumer was near at hand, the artisan system still survived. Where the raw materials were costly or the consumer was far removed or the demand a seasonal or an uncertain one, the worker's subjection to the middleman was almost inevitable. The potter, as long as he turned out cheap earthenware, was independent and almost never in debt; but as soon as he turned brickmaker he became indebted; soon after, the transition was complete and he was turning out bricks for the middleman trader.[6]

[6] Low, op. cit., chap. iv.

The workshop or the small factory came in last. The process was very slow, but under the stress of foreign competition and the introduction of machinery, this form of organization became sometimes necessary. The wire and tinsel industry is a case in point. But factory organization could not come in unless the demand was fairly stable and unless this made the introduction of labour-saving appliances possible, or effected, in other ways, large economies in the cost of production.

Working conditions and the wages to be obtained in domestic industry were far from satisfactory.[7] In this whole group the worker was badly paid and had also little chance of improving his condition. With the advent of factory organization he was taken away from home, and whatever independence in his methods of work he might have possessed was lost; but, on the other hand, his wage increased and his material condition decidedly improved. There is no comparison made here between the independent artisan and the factory worker. Unfortunately, the field in which the independent artisan still existed was very restricted and he was fast disappearing from the urban industry of India.

It is easy to see that there are no novel features in this evolution of industrial organization. The same features have always been noticed in a similar transitional stage in other countries. This merely emphasizes the belief that there is nothing to warrant the contention, frequently made, that the Indian economic structure is the only one of its kind and outside the pale of ordinary economic laws.

[7] The industries, such as *phulkari, kasida* and other embroidery industries in which women of respectable but indigent families were at work, were terribly sweated. Profits, especially in the embroidery work, were considerable, but the peculiar conditions obtaining made it possible for the dealer to lower the wage to an absolute minimum.

CHAPTER XIV

The Pre-War Period—Conclusion

We have now reviewed the pre-war economic history of India. This history seems to fall naturally into three different periods. These periods do not differ greatly from one another in their characteristics; the forces which first came to the forefront during the decade 1860-70 were prominent throughout all these years. Their results were slowly worked out; and even today it is these forces—the results of a contact with the economic structure of the west—that are shaping events in India. The division into three periods is made not on account of the differences of economic characteristics, but because they serve to bring out broadly the cycles of prosperity and adversity.

There will be observed a certain amount of rhythm in these periods. We find a period of prosperity from about 1860 to 1875, when a terrible famine arrested it. The progress began again after about five years of adversity and from 1880 to 1895 there was another fairly prosperous period. Then intervened two famines even more terrible than the previous one, but by 1900 the country had recovered somewhat, and the next fourteen years or so, until the outbreak of the war, were mildly prosperous. This is a rhythm which might be compared to the analogous movements of trade cycles. India, being a predominantly agricultural country, these movements are denoted by alternate periods of good seasons and famine years, rather than by years of trade booms and trade depressions. This is not the place to enter into the highly speculative discussion on the relation of sun-spots to the nature of the rainfall, nor are we concerned here with the connexion between trade cycles and the nature of harvests. We merely point out that even today agriculture is so overwhelmingly important in India that the periods of prosperity of the country as a

whole depend almost entirely on the nature of the agricultural seasons.

This threefold division has, further, another advantage. It helps to indicate three stages in the industrial progress of India. From 1860 to 1875 was a period which witnessed the beginnings of the factories and the plantations, but in 1875 the progress achieved was insignificant. In the same period began a rapid decline of the handicrafts in India; this latter movement continued throughout the next period till the late nineties. Real progress in the factory industries only began after about 1875, and during the next twenty years the two textile industries prospered. It was, however, only after the late nineties that industrial progress all over the country began; and in the first decade of the twentieth century many mineral industries and some small miscellaneous industries came into prominence. It was also during these latter years that there spread in India the use of small machines and small engines, and that there was generally a tendency to make a greatly increased use of mechanical appliances everywhere. There was one feature, however, which was noticeable throughout all these years. Old-established Indian industry, generally, was non-progressive, and a further progress in the application of science to methods of production in the west was always liable to bring about a rapid decline in these industries. The process was especially marked in the handicraft industry, but it could also be observed in the decline of the sugar or the tanning industries. The factory industries established in very recent times were the only ones that were at all progressive.

What was the industrial position of India in 1914? The question has been frequently asked, and many conflicting answers have been given. When we attempt an answer, one thing must always be remembered. We have to take into account not only the new growth but also the decline of old industrial forms. A quantitative statement is impossible. A rough outline would be that village industry as a whole was decadent, and in the towns the majority of the old handicraft industries had declined, while in some of the more important crafts, if there was no increase, neither was there a consider-

able decline; of the modern industries, the plantations, the textiles and the coal mines employed a large number of persons, and in later years there was a considerable growth of small miscellaneous industries. But a statement in this form does not help us at all.

Two indexes have often been used to measure a country's industrial progress: (i) the proportion of manufactured goods in the import and the export trades; (ii) the growth of towns. In the case of India the first test is not entirely satisfactory. For the proportion of foreign trade to internal trade is not very large; and again the most important (numerically) industries of India, such as handloom weaving, do not figure at all in these returns. Mr Justice Ranade was the first to apply this test to Indian conditions; he came to the conclusion that the position of industries had sunk lowest in India about the middle of the seventies, and that from that time till the early nineties the position had been steadily improving. This is substantially corroborated by the other factors that we have considered. Prof. Kale, who applied the methods of Ranade at a later date, merely came to the conclusion that there had been an almost uninterrupted progress since the nineties. Thus by an application of this test we arrive at this result: that the industrial position steadily worsened from about the middle of the century to the seventies (a fact already amply proved above) and that since the seventies there has been, on the whole, steady progress. Examination of the nature and character of the growth of towns did not prove much more; it merely indicated very strongly that when the decline of the old Indian industries is considered the total industrial progress made by India during this period was very small. The returns of the industrial census pointed to the same result.

Not only is the total industrial progress small, but also the position of agriculture as the first industry of India is as strong as ever; and in the total growth of population in India the agriculturist still maintains his position. This growth of population again is a periodical phenomenon generally dependent on the nature of the seasons. The figures[1] of the increase are:

[1] *Report of the Census of India*, p. 7 (1921).

1872-81	3·0 millions
1881-91	24·3 ,,
1891-1901	4·1 ,,
1901-11	18·7 ,,
1911-21	3·7 ,,

The influence of famines on the growth of population is thus very clear; and there is no doubt that, but for this recurring calamity, the increase in population would have been much greater. Even as it is, this growing population has meant an increasing pressure on land in India.[2] Decaying village industry is steadily throwing more and more people on to the land, and only a fixed percentage of this growth has been absorbed by the towns. The result is evident. More and more lands on the margin are coming under cultivation and the subdivision of land has in very many parts of India increased to an alarming extent. This problem of finding an outlet for the growing population is the most important of all in India today. The excess of persons on the land hampers the progress of agriculture itself, and the question of the uneconomic holding is not likely to be solved unless the growth of industries takes away a large proportion of the agricultural population to the towns.

So far we are on sure ground. The whole survey emphasizes all these points: the very slow growth of new industries and the partial decay of old ones; the increasing pressure of the population on the land; the very small progress made in agricultural improvement—especially in the introduction of labour-saving appliances. The considerable change that has come about is neither in agriculture nor in industry but in trade. The methods of trading have been revolutionized, and the volume of both internal and external trade has increased enormously. Markets are now both wider and better organized. But the progress of industry has not gone hand in hand with this commercial revolution. The lines which the small progress that has been achieved have taken are not, indeed, peculiar. They follow in almost every respect the lines of industrial evolution in most other countries. The

[2] For a careful study of the problem see P. K. Wattal, *The Population Problem in India*.

only thing, then, remarkable about this industrial evolution of India has been its slowness.

Thus far, the ground is sure. But then, the very slowness of the progress points to certain deficiencies in the industrial equipment of India; and when an inquiry as to the nature of these deficiencies is made, a survey of economic history does not help us greatly. The attempt, however, may be made and a few points briefly indicated.

Consider the question of capital first; India is well known to be a very poor country and her accumulations of capital are but small. There was a special reason for this. Agriculture, India's chief industry, was conducted all over the country by small peasant proprietors or cultivating tenants. Thus the distribution of property was much more even in India than in most other countries. Now, it is an accepted fact that an equitable distribution of the country's resources does not help the growth of large stocks of capital in the country. Sleeman, deploring the subdivision of land in India, remarked as long ago as 1844 that this prevented the accumulation and concentration of the capital so necessary to the industrial development of the country.[3] Subdivision since that time has gone further instead of being checked. It must, however, be pointed out that in some parts of the country, especially Bengal, there were large landowners possessing considerable capital resources. It is noteworthy in this connexion that the only part of India where industry has been, to any considerable extent, developed by Indian resources is Gujerat; and here there existed from very ancient times an enterprising class of traders carrying on commerce with foreign countries. Again, in most parts of the country, the capital resources were in the hands of the substantial agriculturists, who could always find profitable employment for their money by sinking it, if they so desired, in their land or, what was more likely, by lending it to the needy peasant.

Apart from this agricultural capital which was not available for industrial development, there was in the country a class of traders who, considering the difficulties of commerce in olden times, had brought commercial finance to a high degree of organization. For this trading capital of the coun-

[3] Sleeman, *Rambles and Recollections*, ed. Smith, vol. II, chap. xvii.

try, industry competed with commerce. But what these traders wanted was a quick return. Since the improvement in the means of transport, moving of crops and also trade in imports —especially cotton piece-goods—had become very profitable; they also gave a quick turnover. In the manufacturing industry, on the other hand, the period of waiting for profits was very long, and the returns were not so certain as those in commerce. Whenever capital was invested in an industrial undertaking, the venture was such as would give a reasonably quick return. Once the profitableness of cotton-ginning or rice-milling was proved beyond doubt, capital rushed into these industries, and soon in many tracts there were more of these small factories than was necessary to deal adequately with the raw material produced. The resources of capital were small and a large part was wanted for agriculture; the remainder, which might have been utilized for industrial purposes, was rendered unavailable by the entirely unorganized condition of industrial finance.

Organized banking in India, outside the few important trade centres, was almost unknown, and even the few banks that did exist did not find it profitable to devote their attention to financing industry. This was the unfortunate result of the same causes that had made railways in India look more to export trade than to internal trade. The Presidency banks had from the beginning chiefly financed the movement of crops from rural tracts to the ports. The accommodation was only wanted at harvest time; but during this particular season the demand for money was very strong, and the rate for it rose very high. The banks had, therefore, always adopted the policy of keeping as great a portion of their resources as possible free for harvest time. This meant that they could not lend to any industrial concern for a very long period. These factors had always militated against any help being given from banks to industries. The smallness of India's capital resources, the competition for these from both agriculture and industry, the high profits to be obtained in moneylending and in commerce, and the particularly high rates that ruled for money accommodation at harvest time, all these combined to prevent a large flow of Indian capital into industry.

As far as wages go, labour in India is decidedly cheap. The standard of living among the lower classes is very low and their requirements few. In skilled handicrafts—especially where the occupation is hereditary—labour is also extraordinarily efficient. It is his skill and his low standard of living that assist the weaver in his competition with machine-made goods. It has also been amply proved that, when properly trained and taken proper care of, the Indian labourer is quite as efficient as any other labourer. On the other hand, there is very little doubt that, taking conditions as they are today, Indian labour is decidedly inefficient, even considering the wages it earns.

The main reasons for this seem to be two: (i) the illiteracy of the labourer; (ii) the conditions obtaining in Indian industry. B. D. Mehta, once of the Nagpur Empress Mills, and than whom few people were better authorized to speak on Indian labour, always insisted on want of education as the chief handicap to Indian labour. This entire lack of education makes the labourer unable to grasp the simplest of mechanical operations; his labour, therefore, becomes very inefficient as soon as he is set to work on a complicated machine. The same want of education is partly responsible for the lack of any desire on the part of the workman for a rise in his standard of living. Unless such a desire is present, a mere rise in wages does not increase efficiency, but only encourages the labourer to take a somewhat longer holiday than usual. The excessive hours of work have themselves partly caused this want of education, but primarily it is due to the entire neglect by Government of this, its most important duty. The want of sanitation in the big cities—and generally throughout India—and the entire disregard, in many industrial establishments, of all hygienic laws, have also contributed largely to the low efficiency of the Indian worker.[4] The effect of excessive hours has already been indicated. With a low and stunted physique, a mind entirely untouched by education, and an extremely low standard of comfort, it is no wonder that the Indian factory worker was

[4] *Report of the Indian Industrial Commission*, Appendix L.: 'Industrial Development and Public Health', by Major F. N. White.

inefficient. The low wages, then, were no advantage to Indian industry.

With dear capital and inefficient labour, Indian industry was handicapped in two important ways. As to the resources of the country, on which, after all, its industrial development mainly depends, they are plentiful in many directions. For example, in the production of raw agricultural produce, India possesses both variety and a large supply. Of certain products India possesses almost a monopoly. But there are many deficiencies. To begin with, it must be observed that general ignorance as regards India's resources was remarkable until very recent times. Thus the fact that there were many deposits of iron in India may have been known, but there was complete ignorance as to their extent, their commercial possibilities and sometimes even their exact location.[5]

One of the primary necessities for the industrial development of a country is an abundant supply of fuel for generating power. The most important source of this is coal. Coal, though not abundant, is available in fairly large quantities in India, but all the important fields are concentrated within a small area, and a large part of the country—especially the Madras Presidency—is unable to depend on these supplies to any considerable extent. The slowness of the growth of industries before the twentieth century may largely be attributed to this. For it was only after the early nineties, when an extensive railway system had already been built in India, that the coal industry could expand. The high railway freights on the carriage of coal have also to be considered. Again only Bengal coal is suitable for the production of good metallurgical coke. Oil as a fuel for generating power can only be used profitably in small engines. Large hopes are at present founded on the future use of hydro-electric power in India. The chief difficulty in the way of developing this is the seasonal rainfall. For this makes the construction of very large storage works necessary. The hydrographic survey, undertaken on the recommendation of the Industrial Com-

[5] It was merely an accidental reference to certain old geological survey records that ultimately established the site of the Tata Iron and Steel Co.'s Works. See Lovat Fraser, *Iron and Steel in India.*

missioners, shows that the possibilities of generating a large volume of electric power are confined to the Eastern and Western Ghats. Even here the capital outlay will have to be very large.[6] To this difficulty of obtaining cheap power must be attributed a large part of the slowness in the growth of industries.

Equally important was the lack of working in metals, especially iron and steel. The production of iron and steel is perhaps the most important individual industry in modern times. On it the whole fabric of industrial growth rests. The handicap without it is tremendous. Railways were built in India with imported materials. The machinery for the textile industries was also imported. It was the same with small motors and small mills: almost every mechanical appliance used in the country, down to the many simple agricultural implements used on plantations, had to be imported. This naturally retarded in a great measure the introduction into the country of the use of these appliances. Not only this, but it weighed against Indian industries in their competition with other countries. Schmoller says that the summit and centre of industrial development in the previous stage of industrial evolution was then in the finer textile manufactures.[7] India, here, was undoubtedly supreme and she had reached the highest point of development long before any other country. But the present stage in development is based on coal and iron: and to the late development and the awkward situation of the coal industry, and the almost entire absence, till a very recent date, of the iron industry, must be attributed in a very large degree the present lack of industries in India.

It has often been said that the early development and expansion of railways in India hindered the growth of industries. In short they laid the country too open to foreign competition and thus repressed the growth of indigenous industries. This is a mere conjecture and can hardly be adequately proved. Indeed, it is as likely that, in the case of late expansion of railways, the old industrial forms in India

[6] *Industrial Handbook*, issued by the Indian Munitions Board: 'Hydro-electric Power in India', by J. W. Meares (1919).

[7] Gustav Schmoller, *The Mercantile System*, translated by W. J. Ashley (1896).

would have survived longer and the growth of modern industry would have been even slower. It is, perhaps, not so much the expansion of railways, as the railway policy, that is to be blamed. As pointed out in a previous chapter, this certainly did not give as much attention as should have been expected from it to industrial development.

There were a few other factors. One was the lack of the facilities for technical education in India. India had therefore to depend upon imported experts. Industries in most other countries have also been started with the help of foreign experts; but the peculiarity in the case of India was that, largely on account of her peculiar political position, these imported experts were not replaced, in due course, by native experts. The stream of these imports was carefully continued. Another reason was the indifference of the Government to industrial development. The policy of *laissez-faire* was followed entirely till the beginning of the twentieth century. Since the beginning of the century some provincial Governments have begun to take an active interest in the matter, but the veto of Lord Morley on the activities of the Madras Department of Industries showed that *laissez-faire* was dying hard.

When all these obstacles are taken into account the slowness of this process is largely explained. India could only develop industries in which it had some very strong advantages to counteract all these disadvantages as regards capital, labour and natural resources. The jute industry was placed in a very favourable position by its proximity to the only part of the world where jute was extensively grown. Again, it was a European industry. European industries did not suffer as much from the lack of capital as Indian concerns. India had also a great advantage in the coarser branches of the cotton industry. The short staple cotton of India was peculiarly suited to the production of coarse yarn. The home market was also wide and capable of further extension.

This question of markets is becoming an increasingly important matter. Indian industry depends largely on foreign markets, but the field of expansion in this direction seems to be limited. In the development of factory industry other countries have had a long start. It is only in a few cases like

the jute industry that Indian industry can depend on a stable foreign demand; but, as the history of the yarn trade with China shows, India in the future will have to depend more and more on the home demand. This problem of developing the home demand has not been, as yet, properly tackled. The obvious lines that an industrial development will take have always been held to be (i) supplanting foreign imports of manufactures into the country and (ii) capturing the market catered for by the village artisan. The mere fact that a country imports some manufactured goods in no way indicates the possibility of that country developing those manufactures, but in certain industries India is expected to make good progress in ousting the foreigner. For capturing the village market one of two things must happen: either (i) the standard of living of the village population must rise, or (ii) the manufacturers must be able to produce goods very cheaply. A third possible line that industrial development might take is the further working up of agricultural products before they are exported out of the country.

Lastly, we must point out that industrial development to be real must be all-sided and that it must go hand in hand with improvement of agriculture. Sir Thomas Holland has pointed out, in another connexion, the value of by-products in modern industry. A great obstacle in the progress of the oil-crushing and flour industries in India is the lack of a suitable home market for oil-cake and bran.

The various obstacles that hampered the rapid growth of industries in India are being slowly removed. Recently an industrial bank has been started; there are schemes afloat for the introduction of compulsory primary education and the better training of labour; questions of sanitation and of housing conditions are being seriously tackled. There is now a more widespread knowledge of India's resources and a larger desire among the educated classes to take up industrial pursuits; railway policy seems to be about to undergo a radical change and the attitude of the Government is now definitely sympathetic. All this points to a steady industrial development in the future. We must not, however, be too sanguine. India, though it may have increased its capital resources during the last two decades, is still a very poor

country; the masses are still illiterate and the training of the huge labouring class of a vast country must take a considerable time. The problem of power has not been satisfactorily solved; the iron industry is yet too small and it is turning out only the simplest forms of manufactured products.

Everything points to the fact that India has entered a period of steady industrial development, but, in the near future at least, the process must inevitably be slow. In the meanwhile the country is not reaping any material advantage from the lateness of its industrial evolution. No doubt we had a Factory Law in an earlier stage of the evolution than most other countries, but this did not and does not prevent effectively all the forms of evils which are supposed to be a necessary corollary of the factory. The *Census Report* of 1921 says that Bombay is very much more overcrowded than London, and Karachi a good deal worse than Bombay. The condition of factory workers in general was, in the first decade of this century, as bad as could be expected and their entire want of organization was rendering exploitation of their labour easy. At the same time the tale of the handloom weaver's miserable condition reads as if the description was applied to the English weaver at the beginning of the nineteenth century, and not to the Indian weavers at the end of that century. In short, the initial stages that India has passed through have entailed almost as much suffering on the Indian people as those of any other country in a corresponding state. The example of other countries does not help much, simply because there has not yet been found, in any country, a radical remedy for the manifold evils of this latest phase of industrial organization.

CHAPTER XV

The Agriculturist, 1914-39

THE economic position of the agriculturist continues to depend on the nature of the season to a significant extent over most parts of India. The extent of fluctuations in natural precipitation and the protection afforded by artificial irrigation vary considerably from tract to tract. These determine, in the main, the amplitude of variations in physical production from year to year. There is no reason to believe that the character of natural seasons has changed over the years; however, the area protected by artificial irrigation has been steadily increasing. Also, considerable change has come about in the total effects of a failure of crops. The area over which the effects of any failure are felt has become limited and their severity has been reduced. The process started earlier with improvements in transportation and the commercialization of agriculture. After the first world war, the introduction of mechanical road transport greatly hastened this transformation in rural India. In part the change was also due to improvements in administration. The earlier experience and controversies had brought into existence a relatively adequate system of land revenue suspensions and remissions and of relief operations. Also during large parts of recent decades extensive control has been exercised by Government over trade and transport of food-grains. As a result, the consequences of failures of the monsoon are no longer felt by the entire economy of the country or large parts of it but are usually confined to particular regions and to the rural economy in them. The season of 1918-19 may be considered to be the last in which results of the failure of the monsoon were felt all over the country.

The 1918-19 famine was one of the major famines of India, to be compared with that of 1876-8, or 1899-1900. The failure was indeed so complete that it is stated that 'in the middle of the year [1919] there were reasons for fearing

that the stocks of food in the country simply would not suffice to go round'. However, the maximum number of persons on relief at any time during the year reached only 600,000, one-tenth of the maximum number in 1900. To a large extent this was due to the favourable character of the earlier years. The years 1915-16 and 1916-17 had been good years, specially for rice and wheat, and exports of food-grains had been remarkably low during these years. Government regulated exports and exported foodstuffs to allied countries during the later war years and it was extremely fortunate that the necessity for the exportation of large quantities of foodstuffs to the allies began to diminish owing to the advent of armistice conditions just at the close of the 1918 monsoon. From November 1918 onwards Government restricted the export of food-grains to countries with considerable Indian populations which were normally accustomed to rely on India for their food supply, such as Ceylon and the Straits Settlements. A rigid system of internal control was also set up and a scheme for a proportionate distribution of provincial surpluses brought into force. The system of export and price control was extended to Burma and large quantities of Burma rice made available for import into India. Indian food supplies were further supplemented by 200,000 tons of Australian wheat imported through the Royal Commission on wheat supplies. The imports of grain, pulses and flour into India in 1919 reached a height never attained before.

The numbers on relief in 1919 did not rise after the middle of that year because the monsoon of 1919 was exceptionally good all over India. But the monsoon of 1920 was again poor in many parts of India. Scarcity was declared in some districts of the Bombay Presidency and the Central Provinces, and the distress was especially severe in the Deccan districts of Madras and Hyderabad State. Further, the early cessation of the 1920 monsoon restricted autumn sowing with the result that the spring crops of 1921, particularly Punjab wheat, were very poor. The yield of wheat was estimated as nearly 25 per cent in deficit of the normal. The price of wheat soared very high and Government thought it necessary to reimpose the embargo on wheat exports and encourage the import of foreign wheat into India. The imports

of grain and pulses during 1921 into India greatly exceeded even the record figure reached in 1919. Though the 1920-1 famine was much less widespread than the famine of 1918-19, its effects were more felt. This year the number of people seeking relief was proportionately much larger. Nearly a lakh of people were on relief by the end of 1920; their number rose to about 4·5 lakhs by June 1921. The relief operations had to be kept open in some parts till the end of 1921.

There were no failures of the monsoon with countrywide effects in the two decades after 1921. There were some intense local failures and some parts of the country, e.g. Bengal, Malabar, Sind and Gujerat, suffered considerably from floods during particular years.

Variations in the size of agricultural operations and in the fortunes of agriculturists may be judged from data relating to the area of cultivated land and the volume of agricultural production. The figures of area under crops are relatively trustworthy. The statistical information for British India in this regard is continuous and comparable; this is not the case with data for the Indian States. Hence, the data for British India are presented in the tables and discussed here. It may be assumed that the main movements and trends exhibited by these are broadly true of the whole country. The data in the tables do not include figures for British Burma, which was separated from British India in 1937.

The net sown area or total cropped area did not show any marked increase or decrease during the twenty-five years 1914 to 1939. The levels of these in the concluding years of the period are only a little higher than in the opening years and no definitive movements or trends are noticeable in the aggregate figures. The highly exceptional nature of the seasons in 1918-19 and 1920-1 is indicated by the particularly low levels of areas for these years. There is almost as little movement in the relative shares of food and non-food crops in the total cropped area. Among food crops the most important, by far, were the four main cereal crops, viz., rice, wheat, jowar and bajra. The share of these four taken together remains steady in the total cropped area and the total area under food-grains. The fluctuation in the areas under

Agricultural Statistics of British India

(thousand acres)

	1918–19	1920–21	1924–25	1929–30	1934–35	1939–40
Fallow land	72,668	61,347	47,179	49,714	52,297	47,328
Net area sown	201,384	212,260	226,980	228,161	226,981	209,960
Irrigated Area	47,222	48,957	45,299	51,010	50,534	54,945
Rice	77,613	78,120	79,306	79,424	79,520	70,101
Wheat	19,147	20,368	24,848	24,731	25,655	26,128
Jowar	20,537	22,690	22,470	23,241	21,853	21,677
Bajra	11,201	12,002	11,965	13,291	13,102	13,362
Total foodgrains	177,844	186,890	200,328	200,018	200,635	187,050
Sugar	3,016	2,706	2,655	2,583	3,524	3,629
Oil-seeds	10,473	12,370	15,014	16,330	14,543	16,294
Cotton	14,401	14,114	17,414	16,141	14,486	13,344
Jute	2,473	2,473	2,738	3,268	2,476	3,119
Tea	688	661	716	766	783	738
Tobacco	1,047	932	1,066	1,173	1,257	1,181
Fodder crops	7,228	8,108	8,836	9,381	10,308	10,467

individual crops from year to year are fairly large but there appears no consistent trend during the whole period except one of slight fall in the area and proportion of the total acreage under bajra. Bajra is among the least productive of the main cereal crops and is grown chiefly on light soils. Decline in its acreage was apparently due to the movement, wherever possible, of land from bajra either to jowar or wheat or to groundnut or cotton.

Among groups of non-food crops no significant trend in relation to acreage is discernible over the twenty-five year period either in the case of cotton or of jute. On the other hand, there is a distinct, though small, upward trend in the area under oil-seeds, sugarcane and the plantation crops. In the oil-seeds group the increase in area is the result chiefly of a large and continuous rise in the area under groundnut while some other oil-seeds, notably sesame and rape and mustard, lose ground. Among plantation crops the increase in acreage was marked under rubber and tea.

The fluctuations from year to year in the total area under crops can be traced for the most part to the nature of the annual seasons. The relative variations in areas under individual crops appeared connected with relative profitability. This was, for example, the main explanation of fluctuations in proportions between rice and jute in Bengal. It was also a major factor in variations in areas under cotton and groundnut. The steady increase in area under sugarcane, especially in the thirties, was obviously the result of the steady market created for the crop in some regions by the establishment of the sugar industry within the country.

The total acreage base of agricultural operations was broadened only to a small extent during the period. The overall crop composition also did not undergo any significant change. The next important question relates to productivity. In all fully settled countries the scope for expansion of the cultivated area is limited; progress had, therefore, to take place by increase in per acre productivity. Data by which to judge of productivity are scanty and are not very reliable. It is, therefore, not possible to cite reliable aggregative estimates in this regard. The most widely accepted generalizations on this subject are those made by Dr Panse after a study

of the data from five provinces for the years 1910-11 to 1940-1 for a number of important crops.[1] Dr Panse states his conclusions as follows: 'For cash crops, the data reveal clear evidence of generally increasing yield rates and, in respect of sugarcane, an expansion of area is perceptible in several cases as also an increase in the proportion of irrigated area. Yield trends are rather heterogeneous, yield showing an increase for certain crops in certain States, a decline in certain others and absence of any perceptible change in the remaining. Generally speaking, an expansion of area under a crop has been seen to be a factor associated with the lowering of yield rate, while an increase in the proportion of irrigated area has the opposite effect.'[2]

In discussing the agricultural situation in India during the first decade of the century attention has been drawn to the constant proportion of food-grain crops in the total acreage under crops of the country and the marginal position of exports of food-grains from the country. It has been pointed out that these exports, especially of wheat, were liable to large fluctuations and that the exports were to be considered as a reserve against famines, i.e. representing the needed extra production in ordinary years against seasonal failure of harvests. During the twenty years after 1914 there was a relatively small increase in the acreages under food-grains, and with the continuing growth of population the situation regarding exports of food-grains changed significantly.

It has been calculated that in the twenties, with mediocre crops, India produced just enough wheat to satisfy domestic requirements; in adverse years there may actually have to be a net import and it was only with good crops that there was any surplus available for exports.[3] However, the domestic demand for wheat in India was elastic at this time, and during the twenties considerable shipments of wheat took place when good harvests in India coincided with a high world price.

[1] It should be noted that no province from eastern India was included in Dr Panse's study.

[2] V. G. Panse, 'Trends in areas and yields of principal crops in India', in *Agricultural Situation in India* (1952).

[3] *India as a Producer and Exporter of Wheat*, Stanford Food Research Institute, chap. ix (California, 1927).

The exports in 1924-5 were unusually high because of the combination of large stocks and a good harvest in India with a low expected yield of the world crop which meant a high level of prices. After that year, however, the exports were very small and there was actually a net import of wheat into India during the years 1928-9, 1929-30 and 1931-2. Even with an excellent wheat crop in 1929-30 there was little export on account of the weak international demand and the competition of foreign wheat. With the deepening of the depression the Indian market itself was threatened by Australian imports and Government felt it necessary to protect Indian wheat interests by the levy of a duty of Rs 40 per ton on imports in March 1931.

The duty was later turned into a protective one and successively lowered before its complete withdrawal in 1937. Indian exports and imports of wheat remained at a very low level between 1932-3 and 1935-6. During the three years preceding the outbreak of the second world war the volume of both increased somewhat but neither net imports nor exports, in any year, were significant. The exports during these years were almost all from Karachi, mainly to the United Kingdom.

Even before 1914 the exports of rice from India were mainly those from Burma. The average exports for the five years before 1914 were 2,398 thousand tons out of which 1,814 thousand tons were from Burma. Moreover, at this time there were substantial imports of rice into India proper from Burma and India was thus a net exporter of rice to a much smaller extent than the above figures would indicate. After the war India became permanently a net importer of rice. The position immediately after the close of the war was abnormal and imports of rice, etc., were very high because of famines and scarcity. The three-year period 1922-3 to 1924-5 may, therefore, be taken to indicate the normal position at the time. Average annual exports of rice from India during these three years were 387 thousand tons; at the same time the average annual imports of rice into India amounted to 512 thousand tons. The gap widened steadily during succeeding years. In 1938-9 exports of rice from India amounted to 282 thousand tons while the imports of rice into India

were 1,282 thousand tons. Till the early twenties the imports of rice into India were exclusively from Burma; they were obtained predominantly from that source even in 1939.[4] After the separation of Burma in 1937 India appeared as a net importer of rice in the statistics of international trade.

Changes also took place in foreign trade in other agricultural products and they affected domestic production and acreage. The war and its aftermath affected the European continental market for Indian oil-seeds and lessened their imports into Europe during the decade 1914 to 1924. But the period of the war brought about other changes which had a more continuing long-term effect. On the technical side the war helped the development of refining processes and the general effect of these changes was to increase considerably the interchangeability of oils. This affected the position of oil-seeds which had been valued in specific directions. Further, the war helped to develop other sources of supply of oil-seeds with the result that the peculiarly favourable position held before the war, by certain Indian oil-seeds, was lost. The largest change came about in the exports of sesame and of rape and mustard. The exports of cottonseed were similarly affected. The following table indicates the extent of the change.

Exports from India (thousand tons)

	Pre-war (1914) average	Post-war average	Average for three years 1936–39
Linseed	379 (73)	142 (59)	280 (64)
Rape and Mustard	273 (23)	206 (19)	27 (3.1)
Sesame	119 (25)	28 (6)	12 (2.8)
Cottonseed	240	155	5
Groundnut	212 (35)	195 (19)	731 (24.2)

Figures in brackets represent percentage of exports to total production of the crop.

Source: *Review of the Trade of India, 1938-9.*

[4] Government of India, *Marketing of Rice in India and Burma*, p. 63 (1941).

The oil-seed to profit from the changes was groundnut, exports of which increased phenomenally in the post-war period. It is interesting to compare this development with the trends revealed by the acreage under the different oil-seed crops.

British India—million acres

	Total oilseeds	Linseed	Rape	Sesame	Ground-nut
1913–14	16·5	2·6	6·2	3·9	1·8
Average of three years 1921–4	16·6	3·0	6·2	3·3	2·2
Average of three years 1936–9	20·1	3·0	5·5	3·3	5·6

Source: W. Burns, *Technological Possibilities of Agricultural Development in India* (1944).

The earlier table revealed that the loss of the export market of sesame came about during the war period while that of rape and mustard was lost chiefly during the inter-war period. Trends in acreages reveal the effects of this difference. The proportionate fall in acreages in the years between 1914 and 1939 is of the same order. However, the period during which this fall comes about is different. The remarkable point brought out by the figures is the relatively small perceptible effect of the fall of exports on the acreages under individual oil-seed crops. This indicates large support given by domestic demand to these oil-seeds; also, the technical reasons which led to the undermining of the position of the particular oil-seeds in the international market are evidently not applicable in the case of the Indian demand. This is essentially a demand from households of oil for domestic, chiefly culinary, use. In this context the technical transformation is not very important and the demand is buttressed by traditional preferences, local production and other similar reasons. Moreover, the relative stability of the rape and sesame acreages in spite of falling exports would point to an Indian demand that is growing, however slowly. The Indian demand for these oil-seeds is mainly a demand for an article

of food and the underlying forces determining it are similar to those operating on the production and consumption of food-grains and pulses.

The acreage under cotton showed no consistent trend for the period as a whole. It was subject to trade fluctuations which were governed mainly by relative prices. The demand for exports of Indian raw cotton was indirectly a factor in determining the prices of cotton within the country. Formerly, the price relation was that established with possible alternative crops, chiefly millets; however, in the inter-war period groundnut had become an important alternative to cotton in some areas. Increase in the area under irrigated cotton in Punjab and Sind was a notable feature of the thirties. As with acreage, there was no marked increase in the level of exports of raw cotton attained on the eve of the first world war.

There was no marked change in the acreage under jute, though there were prolonged periods of low and high acreages. The area under jute depended on a number of factors. One of these was the relative price of rice and other elements determining the area under rice. Other factors were the demand for exports of raw jute and the level of consumption of raw jute by Indian mills. The level of exports of raw jute on the eve of the second world war was the same as that a quarter of a century earlier.

The area under sugarcane revealed a marked trend towards increase, especially in the thirties. This was closely related to the protection afforded to the sugar industry and the stable demand created for producers of sugarcane. The increase in the area in the thirties took place chiefly in U.P. and Bihar where, in the main, the expansion of the sugar industry took place at this time.

Reference to Dr Panse's findings regarding yields of crops during the inter-war years would indicate that there was no general improvement in levels of agricultural output during the period. In particular directions, however, some improvement in methods, technique, etc. were in evidence. Systematic work on agricultural improvement may be said to have begun with Lord Curzon's organization of the Agricultural Department. The introduction of new crops or foreign

varieties of Indian crops on which attention had been concentrated in the previous century was largely given up, the chances of success of such attempts being reckoned as small.[5] The chief question tackled by the Indian and provincial agricultural departments was the study and improvement of existing varieties of agricultural products.

Perhaps the first systematic attempt of this kind in India was the study of wheats by the Howards. As Dr Voelcker pointed out long ago, the methods of cultivation as well as the varieties of crops grown varied immensely throughout India, and it was obvious that the selection of the most suitable varieties and their standardization would be of considerable benefit to the cultivators. A large amount of work has been done in most provinces in the introduction of improved varieties of crops. The chief successes have been in wheat, cotton, jute, groundnut and sugarcane. The cultivators are also ready to take these up as soon as they become convinced of their financial benefits. A very striking instance of the readiness of cultivators given by the Agricultural Commission was the increase of groundnut cultivation in Khandesh and North Gujerat from 4,500 acres in 1912-13 to 310,000 acres in 1926-7. The work of research involved in experimenting upon suitable varieties has to be supplemented by the spread of the knowledge of these varieties and the effort to keep these improved strains pure. For this latter purpose special seed farms with ancillary agencies for propagation and distribution of seeds were set up and, in cases of crops like cotton where the fear of deterioration and adulteration of seed is specially great, legislative measures such as the Cotton Transport Act of 1923 were resorted to.

The introduction of improved varieties was found to be the easiest task for a variety of reasons. The adoption of improved varieties usually required no basic change in the organization and methods of the agriculturist; ordinarily, it did not even involve substantially greater outlay. Moreover, the results of the adoption of improved varieties were clearly observable and readily demonstrable. In respect of other improvements, such as use of improved implements, greater use

[5] *Report of the Indian Agricultural Commission*, pp. 98-9.

of fertilizers and other improved practices, the situation of the average cultivator was not favourable. Having regard to the small holding, to the poverty and ignorance of the Indian peasant, the variability of the seasons and the hold of the moneylender-trader on him, major results in most directions could not be expected. Added to all these factors, during a large part of this period, was the problem of the basic profitability of agriculture as determined by the prices of agricultural products and the terms of trade of the agriculturist.

Prices of agricultural products and the terms of trade of agriculture are closely connected with general fluctuations in economic activity and with movements of rates of exchange and other related phenomena. These will be discussed at an appropriate place later.

In relation to the organization of agricultural production two problems attracted attention. The first was that of tenancy, that is, the system of rights in land and the terms on which the actual cultivator held the land he cultivated. The second was that of the size of the holding of the average cultivator and its internal arrangements; this was usually referred to as the problem of subdivision and fragmentation.

Government had found it necessary to legislate in relation to the first problem in the landlord provinces like Bengal and U.P. even in the latter half of the nineteenth century. In the earlier part of British rule the problem had been almost completely ignored. The differences in terms of revenue settlement and tenancy arrangements as between province and province at the beginning of British rule were the result, in part, of pre-existing conditions and, in part, of the prevalent ideas of British administrators of the particular areas. Where revenue settlement appeared possible and proper for whole estates with landlords or for entire villages this was undertaken; where such intermediaries were not readily available and the British administrators were reluctant to create them the settlement was made with individual cultivators. In the former case Government saved a vast amount of troublesome and detailed work by the fact that the responsibility for the collection of land revenue lay upon a comparatively small body of persons with whom alone Government had direct dealings. And this consideration had

great importance, especially in the early days. Even the earliest British administrators, however, were evidently aware that settlement with landlords did not entirely absolve them of the responsibility in relation to rights of holders of land at lower levels. For example, the permanent settlement of Lord Cornwallis provided for the compulsory delivery of *pattas* or leases by landlords to tenants and laid the responsibility on landlords for the maintenance of village accounts and records. However, these were no more than paper precautions. No attempt was made to enforce them. In fact the *patta* regulations were utilized by the zamindars (landlords) for the destruction of the rights of tenants. And because the duty of maintaining the record of rights was thrown on an agency paid by the landlord that record, together with other village records, became utterly worthless not only for purposes of defining tenant rights but even for ordinary statistical purposes. This, parenthetically, was the origin of the great difference in quality between the village records of the zamindari and of the ryotwari provinces which persisted long after the abolition of zamindari. Modifications of the revenue system in the landlord provinces made during the first half of the nineteenth century had all the effect of further worsening the position of the tenants. In order to enable landlords to pay the land revenue promptly, they were armed with powers of distraint, and even in some cases of arrest, in the collection of rents from tenants. In the same way legislation passed in the interests of purchasers at revenue sales had the effect of destroying the older rights of tenants.

The Bengal Tenancy Act of 1859 marks the turning point. Its approach, as that of most other Indian legislation until relatively recent times, was that of protecting old or hereditary rights. It benefited chiefly tenants who had held at fixed rents since the permanent settlement or for at least twenty years and the tenants who had continuously held land for twelve years. The protective provisions were grant of occupancy rights and prevention of arbitrary increases of rent. The 1859 Act was followed by a series of amending acts seeking to prevent evasion by landlords, attempting to provide for a proper record of rights and also protecting

even non-occupancy tenants from frequent capricious and inequitable enhancements of rent. The tenancy legislation in U.P. followed, in general, the lines of legislation in Bengal. It created a class of fixed-rent tenants whose rights were heritable and transferable and another class of 12-year occupancy tenants. Later, in 1876, a new class of expropriatory tenants was created by allowing ex-proprietors to retain privileged tenancy rights in their *sir* land, i.e. in land considered as the permanent home-farm of the proprietor.

The Central Provinces had a system of land revenue, viz. the Malguzari, which was intermediate between the Zamindari and the Ryotwari forms. Only in the tenancy legislation of the Central Provinces before 1914 was effective protection sought to be given to the vast bulk of cultivators who belonged in all the other landlord provinces to the non-occupancy, non-protected class. The Central Provinces tenancy legislation provided against eviction and arbitrary enhancement of rent of the whole class of tenants-at-will. It also provided that occupancy rights could not be sold in execution of a decree and made the rights of the occupancy tenants and of the ordinary tenant inalienable.

After the adoption of the Montford reforms, tenancy legislation entered a new phase. The element of popular participation in government introduced new pressures and led to a new point of view being adopted in relation to the problem of tenant protection. In most cases this meant attention being paid to the sub-tenant, who was ordinarily the actual cultivator. The permanent settlement of Bengal led to a constant widening of the margin between the money payment of revenue for land made to Government and the amount of the rent actually charged to the cultivator. The legal protection afforded to classes such as hereditary or occupancy tenants resulted in the creation of intermediate privileged positions. As the creation and maintenance of occupancy or other protected tenant rights was not linked with cultivating status it was profitable for their holders to sub-lease when this became possible or necessary. The result was the creation, over decades, of a series of inferior holders between the landlord who held from Government and the actual cultivator. In Bengal, where this process offered

the most scope and had gone the furthest, it was called sub-infeudation. In some districts of Bengal it was not uncommon to find, by 1939, as many as 15 to 20 grades of tenure holders.[6] The Bengal and Bihar legislation of the inter-war years sought to protect to a limited extent the position of the cultivator sub-tenants—called 'under-ryots'. In both these provinces legislation also attempted to curtail the evil of the exaction of illegal cesses by landlords. However, in neither of these provinces was any attempt made to give protection to the large class of crop-sharers. In U.P. a class identified as non-occupancy tenants-in-chief were declared as having statutory life-tenure with the right to the heir to hold on for another five years. This step, first taken in 1926, was accompanied by special concessions given to the landlords for extension of their *sir* lands on which, it was legislated, no further tenant protection rights of any kind could accrue. The U.P. Tenancy Act of 1939, however, curtailed substantially these privileges granted to landlords in relation to *sir* lands, and gave heritable rights to all statutory tenants. The U.P. tenancy legislation did not at the same time extend protection to crop-sharers. In the Central Provinces, where all tenants were already protected to some extent, legislation in 1920 conferred rights on ordinary tenants in many respects similar to those of the occupancy tenants and the amending Act of 1939 empowered occupancy tenants, to a limited extent, to transfer their rights in the holding and to sub-let.

Legislative activity in relation to tenancy during the inter-war period was undertaken chiefly in two stages. The first stage was that of the Montford reforms and ministries under diarchy. Most tenancy legislation enacted in this stage was passed before 1930. The second stage was that of the ministries under the Constitution of 1936. Legislation passed during this stage was enacted within a year or two previous to the outbreak of the war in 1939. While during the first stage tenancy legislation was contemplated only in the landlord provinces where some kind of tenancy regulation existed already, during the second stage attention was paid to the problem even in provinces like Madras and Bombay.

[6] *Report of the Land Revenue Commission*, Bengal, vol. I, p. 33 (1940).

These provinces, though predominantly ryotwari, had landlord tenures in some parts. The rights of tenants in these had not been protected by specific legislation in this behalf with the exception of the Madras Estates Land Act of 1908. After 1936 the problem of affording protection to tenants in the landlord areas of these provinces came under consideration. Also, attention began to be paid to the problem of tenant protection in the ryotwari areas.

Theoretically 'ryotwari' connotes a system of land settlement in which the cultivator of land directly pays land revenue to Government. When this happens no intermediary intervenes between the state and the cultivator and no problem of landlord-tenant relation arises. For the major part this was the situation when the original settlements were undertaken in ryotwari areas at the beginning of British rule in each region. However, with the passage of time, changes came about, chiefly in two ways. If the original holder or his successor in title ceased for some reason to cultivate the land and sub-let it, the new tenant-cultivator had neither direct connexion with Government nor any rights in law against the holder. Secondly, if the holder-cultivator found it necessary to alienate his title in land, for example in satisfaction of debt, and the new holder did not himself cultivate but allowed the previous holder (or some other person) to cultivate as tenant, a similar situation would arise. By 1935 both these processes had been at work for about a century in many parts of Madras and Bombay and had created a body of tenants-at-will which was substantial in many districts of the two provinces. Though no detailed inquiry had been conducted to assess the extent of tenancy in these provinces, occasional investigations, as at the time of the land revenue settlements, gave useful indications. For example, statistics (for about 1921-2) given for four typical villages in Satara taluka showed that 'in one village near the city about two-thirds of the land was cultivated by tenants, in another village further afield less than 37 per cent was cultivated by tenants while in two villages farther away the proportion was about 16 per cent and 9 per cent only'.[7] Recent investigations disclose that the extent of tenancy in the ryotwari

[7] D. R. Gadgil, *Bombay Land Revenue System*, p. 12 (1928).

areas of West Maharashtra in 1948-9 differed from district to district within the range of 15 to 30 per cent.[8] Although these statistics refer to a period ten years after the Tenancy Act of 1939 they may be taken to indicate broadly the extent of the problem during the inter-war period.

The Bombay Act of 1939 represented the first legislation passed for the protection of tenants in a ryotwari area. Its main provision was the creation of a class of protected tenants. This class was defined, following the precedent of occupancy tenancy in zamindari areas, as tenants with continuous occupation for six years. Subject to certain limitations, protected tenancy was made permanent and heritable. The protected tenant was also given the right to apply to the revenue authorities for the determination of reasonable rent to be paid by him. The limitations on protected tenancy were twofold. In the first instance, it could not be created against the smaller landlords. Secondly, a landlord could terminate the tenancy of a protected tenant if he required the land for his own cultivation or for specified non-agricultural use. This provision regarding resumption was introduced presumably on the analogy of the *khudkast* or *sir* lands of the zamindari provinces. These kinds of lands were supposed to be under personal cultivation of the landlord and were differentiated from others in relation to tenancy legislation. As indicated above, in U.P. no tenancy rights could accrue on *sir* land and the landlords in that province were interested in extending the scope of this class. The resumption provision of the Bombay Act, in fact, treated all leased land in the province as if it was *sir*, that is no permanent tenancy rights could at any time be created on it. Tenants other than protected tenants were given limited security for a period of ten years and provision was made for fixation of maximum rents in their case also. The Bombay Tenancy Act of 1939 gave real protection only to a relatively small class of cultivators and the effectiveness of the protection was also limited. However, the Act had importance in so far as it recognized the existence of the problem in ryotwari areas and drew attention to its main elements and difficulties. In the other large ryot-

[8] Dandekar and Khudanpur, *Working of Bombay Tenancy Act, 1948*, chap. iii.

wari province, Madras, a committee was appointed (1938) to consider amendment of the Madras Land Estates Act of 1908. However, the report of the committee did not lead to any legislation modifying the 1908 Act, nor was any action taken regarding tenancy in the ryotwari areas in that province.

The problem of subdivision and fragmentation of holdings also came into prominence during the inter-war period. The problem of subdivision arises out of the process of continuous division of owned land from generation to generation. While the prevailing law of succession may make such division possible it is the increase in the numbers that have to be supported on land that makes it necessary. The latter phenomenon also makes it difficult for a cultivator with a small owned holding to increase his total cultivated area by leasing-in additional land. Continuous division among heirs of owners of land or of heritable tenancy rights leads, ordinarily, to division of areas of individual fields and plots. This is because of variation in location and quality of the different fields and the desire of each sharer to have a portion of the better. The result is dispersal and reduced size of individual units, fields or plots, contained in an ownership holding. And unless this feature can be significantly modified by extensive leasing-in and leasing-out the characteristics of the ownership holding are reflected in the cultivating holdings also. From the point of view of productive efficiency it is the small size and 'fragmentation' of the cultivated holding that matter. These characteristics of the cultivated holding are, however, essentially derived from historical developments regarding division of rights in relation to land.

The Royal Commission on Agriculture (1928) held that the evil of fragmentation of cultivation was, in fact, much more extensive and had been carried to greater extremes than the fragmentation of land of permanent right-holders.[9] The extent of the evil could not be ascertained from any official statistics. However, a number of village surveys carried out during the inter-war period gave an indication in relation to some tracts. It was found that in very poor and precarious tracts such as Bundelkhand, parts of West Maha-

[9] *Report of the Royal Commission on Agriculture,* chap. v.

rashtra and East Punjab, fragmentation was carried to extreme limits and in Konkan the position was, perhaps, the worst. Where there were marked variations in soil and other conditions moderate fragmentation may have some justification but it usually existed to an extent far in excess of any permissible limits and its effects were wholly bad. It resulted in reduction of the land surface available for cultivation, increased costs and prevented the adoption and spread of improved practices and of intensive cultivation.

Fragmentation was a secondary phenomenon and its recurrence could not be prevented unless the average size of the holding was itself stabilized at a reasonable level. However, the evil effects of fragmentation were great and the problem could immediately and in part be dealt with directly. Attempts were, therefore, made to eliminate fragmentation through a process of consolidation of holdings. Consolidation could be achieved either by voluntary effort as through an exchange of plots or fields or by the state bringing it about through its agencies under some kind of legal sanction. Voluntary action was exemplified by consolidation through co-operative societies formed for the purpose in the Punjab. The first such society was founded in 1920. Ninety per cent of the owners of land in the village owning at least 75 per cent of the land had to join in for the formation of a co-operative society. The process of consolidation usually led to a radical alteration of old boundaries and of roads. Government sanctioned suitable staff for the purpose and bore its cost. In 1936 a special Act was passed to remove legal and other disabilities experienced in the work. By the end of 1939 the area consolidated through the activity of consolidation societies amounted to over ten lakh acres. It was claimed that in consolidation brought about by this method a great many incidental benefits, such as of providing land for public purposes and amenities, were also obtained. Apart from the realization by cultivators of the benefits of consolidation and the positive policy adopted by Government, the progress of co-operative consolidation in the Punjab was helped by the relative homogeneity of the soil and the general availability of irrigation in particular tracts. Legislation to facilitate consolidation was passed in Baroda State in 1920. This

empowered Government to act on receipt of application of a certain minimum proportion of holders of land in a village and laid down the detailed procedure to be followed. The results flowing from this purely permissive legislation were, however, very meagre. Much more substantial progress was achieved by the Central Provinces Consolidation of Holdings Act (1928) which was applied, in the first instance, to Chhattisgarh division.

In this division, a periodical distribution of the fields in the village so as to ensure that each cultivator in turn got his share in different kinds of land was traditionally practised. The Act provided for the appointment of a consolidation officer to make inquiry and prepare a scheme of redistribution of lands on the application of two or more permanent right-holders in a village. The scheme was to be prepared in consultation with a panchayat of local residents and had to obtain the agreement of half of the holders with two-thirds of the land. Final sanction was accorded to the scheme by the Settlement Commissioner. The scheme as sanctioned became binding on all the permanent right-holders. The entire work of preparation and implementation of the scheme was entrusted to consolidation officers. A civil court had no jurisdiction in matters within the competence of the consolidation officer. Though it was mainly permissive, the results of the scheme in Chhattisgarh were fairly satisfactory, more than ten lakh acres were consolidated by 1939 and the average size of the undivided plot was increased by five to six by the process of consolidation. A uniform contribution of four annas per acre was levied on cultivators towards the cost of the scheme. This covered the major part of the cost; the rest was borne by Government.

In Uttar Pradesh attempts were made to bring about consolidation through co-operative agencies as in the Punjab. However, little was accomplished and the relative failure was attributed to the heterogeneity of soils and more particularly to the complexity of land tenures in the province. The latter difficulty, it may be noted, was shared by most of the zamindari areas in the country. Active thought was given to the problem in other provinces but no programme of action or legislation had been undertaken before 1939.

The basic problem of subdivision proved even more elusive. The Royal Commission on Agriculture noted that subdivision is retarded when restrictions are imposed on the alienation of land and that it could be prevented in particular circumstances, where special conditions could be attached to grants of land or in the case of large land-owners by insistence on primogeniture, as this class was rich enough to provide for younger sons. The Commission drew attention to one special case of failure. This was in Bombay where it was at one time thought that partitions would be deterred if they were ignored in the revenue papers when the partition resulted in creating holdings below a certain limit. The expectation was not realized and the attempt had to be given up as in a short time the revenue records bore no resemblance to the facts.[1] It was in Bombay also that an abortive attempt was made during this period to deal with the problem in a radical manner. The Bombay Small Holdings Bill (1927) did not follow the usually advocated path of changing the laws of inheritance. It tried, instead, after providing machinery for the determination of the minimum area that could be cultivated profitably as a separate plot, to prevent the further division of old fragments and the creation of new ones. It did this chiefly by giving neighbours of fragments rights of pre-emption and of leasing the fragments and by prohibiting the cultivation of new fragments except in conjunction with neighbouring plots which would bring the total area up to the economic unit. No doubt the approach was well thought out and logical. However, it was not a practicable measure because the problem of subdivision could not be considered and dealt with in isolation. As pointed out earlier, it was part of the larger question of employment opportunities. Continuous subdivisions, in countries like India, helped to support increasing numbers on the land though at, perhaps, declining standards of living and in a condition of chronic underemployment. In the circumstances, successful establishment by law of a higher size of the average cultivating holding could only lead to a proportionate increase in the numbers of the completely

[1] op. cit., chap. v.

landless. Therefore, unless an employment policy for these had been fully thought out in advance it was dangerous to embark on such legislation by itself. The Bombay Bill had to be dropped by Government on account of the strong opposition encountered in the Legislative Council. The following remarks of the Royal Commission on Agriculture on the Bombay Bill provide an index of contemporary opinion on the problem: 'We trust that in any scheme involving the uprooting of people from their ancestral fields, full provision will be made for the utmost possible consideration of their opinions and prejudices.'[2]

Since the establishment of British rule the problem of the indebtedness of the Indian peasant had assumed a new and, in many instances, an acute form. The increase in debt of the peasant was associated with a number of developments. Basically these were, commercialization of agriculture, the secular trend towards a rise in the level of prices, the establishment of the right of the creditor to seize land in satisfaction of debt and the widening of the scope of alienable land rights. The most important steps taken to deal with this problem till 1920 had been certain restrictions on the operations of the moneylender and the power given to courts to examine critically his dealings as in the Deccan Agricultural Relief Act, restraints on alienation of land, of which the classic example was the Punjab Land Alienation Act, and the establishment of the system of co-operative credit. All these had only limited effects. After meeting with relative success in the initial years the Deccan Agriculturists Relief Act became inoperative. This was largely because ways had been found in the meanwhile to circumvent its provisions. The Usurious Loans Act (1918) proved ineffective in all provinces from the beginning. The Agricultural Commission, though agreeing that legislation could not eradicate the evil of indebtedness, commended legislation on the model of the British Moneylenders' Act of 1927 for preventing the grosser abuses of the Indian moneylending system; the Commission also believed that simple Rural Insolvency Acts might prove useful in checking the conti-

[2] op. cit., p. 141.

nuous growth of the burden of inherited debts. The Central Banking Inquiry Committee (1931) laid great stress, in addition, on the 'pursuit by local governments of a vigorous policy of debt conciliation on a voluntary basis'.[3]

There is need to distinguish between the more important types of situations before analysing further the problem of peasant indebtedness. One distinction is that between cultivators in ryotwari areas where the bulk held some alienable rights and those in zamindari areas where this was not the case. As a general rule in zamindari areas the landlord supplied credit to a large extent; the main exception to this was Bengal where the moneylender was generally a non-agriculturist. Where the landlord supplied credit his hold on the tenant became very strong as he could usually avail himself of his powers to recover rent for the recovery of his debts. Where the tenant had no alienable valuable rights in land the extent of the credit obtained by him was meagre and its cost very high. A chronic condition of relatively low absolute level of indebtedness was the lot of the bulk of the cultivators of the zamindari areas. Also in their case the problem of debt was closely bound up with the question of obtaining protection as tenants. In the ryotwari areas the moneylender system, as such, developed in a purer form. A broad division to be observed in the areas is that between the precarious and low-income tracts and those with a relatively secure as well as prosperous agriculture. In the first, insecurity imposed a heavy recurrent handicap on the cultivator. Dr Mann calculated that the famine of 1918-19 led to an increase of 44 per cent in the indebtedness of Jategaon Budruk.[4] Conditions of insecurity set in motion forces which led in many cases to a steadily increasing level of debt until the peasant lost his ownership rights in land. This happened particularly when a period of lowered prices combined with adverse seasons. In the secure and relatively prosperous areas the effects of the operation of the moneylending system were less extreme.

One of the most exhaustive accounts that we have for the

[3] *Report of the Central Banking Inquiry Committee*, p. 65 (1931).
[4] Mann, *Land and Labour in a Deccan Village*, Study No. 2, p. 135 (1921).

early part of this period is that of Darling for the Punjab. He considers that the power of the moneylender in the Punjab was at its zenith during the years 1880 to 1910 during which time '*à propos* of the wealth pouring into the country the moneylender got the oyster and the government and the cultivator each got a shell'. After 1910 there came about a change which was due to the land alienation legislation, the establishment of co-operatives but above all to the changes brought about by the war with its large recruitment for the army in Punjab villages and the rise of prices. As a result, in central Punjab and in canal colonies the power of the moneylender had been broken and it was, more or less, weakened elsewhere. However, this did not mean debts had been liquidated. In many cases debt increased with prosperity. Darling found that at the end of the prosperous war period only 17 per cent of the proprietors of land were free from debt and that debt was almost as widespread among tenants as among farmers. Also as long as the moneylender system had its hold unprofitable seasons always held the danger of the liquidation of any economic progress that had been made by the cultivator. Though indebtedness was almost as widespread in the prosperous tracts as elsewhere, in the more secure and prosperous tracts the burden of debt was lighter and so also was the power of the moneylender and the level of rates of interest. The report of the Bombay Provincial Banking Inquiry Committee gave some data in relation to rates of interest. The average level differed from tract to tract. While it was 12 per cent in Gujerat it was 18 per cent in the dry cotton tracts of Maharashtra and Karnatak and 24 per cent in the non-cotton dry areas of Maharashtra and Karnatak and in the aboriginal tracts. The committee further pointed out that there was wide divergence of types of cases in the same tract. In North Gujerat numerous agriculturists in parts where agricultural conditions were unstable paid a rate of 18 to 24 per cent while many substantial *patidars* in Kaira district obtained finance at very low rates.[5]

[5] *Report of the Bombay Provincial Banking Inquiry Committee*, p. 55.

A considerable amount of data, quantitative and qualitative, relating to rural debt was collected by the Provincial Banking Inquiry Committees. These data relate mostly to the year 1929-30, that is, just before the onset of the depression. The methods and scope of the inquiries of the Provincial Committees were not uniform and it is not possible to present a consistent all-India picture on their basis. The more important findings of the Committees were that among British Indian provinces the Punjab and Bombay showed the highest debt per family while Orissa, U.P. and Bengal were among the lowest.

With the problem of indebtedness is also intimately connected the question of the transference of land from peasant proprietors to moneylenders. Information as regards this, however, may be said to be almost non-existent. We therefore content ourselves with quoting the remark of the Agricultural Commission that 'moneylenders were steadily adding to their landed possessions in most provinces'.[6] Legislation laying restrictions on alienation of land has already been noticed in a previous chapter and the only addition to this during the period under review was the Central Provinces Land Alienation Act of 1916, whose operation, however, was restricted to the members of the aboriginal tribes of the Chhattisgarh Division. Both the Punjab and the Bundelkhand Acts seem to have worked satisfactorily as far as their primary purpose, that of preventing the transference of land from agricultural to non-agricultural classes, was concerned. However, it is doubtful how far the legislation succeeded in preventing the growth of indebtedness. The non-agriculturist moneylender, who combined his business usually with trading, still continued to be important, especially in relation to short-term finance. This short-term finance was largely unsecured. When there was need to borrow for long-term purposes the larger loans had to be drawn on security of land. In this field the Alienation Acts created a privileged position for the increasingly important class of agriculturist moneylenders. A further result was, it is said, an increase in the rates

[6] op. cit., p. 421.

of interest charged by agriculturist moneylenders and in the extent of mortgage debt.[7]

Movements in the indebtedness of the peasantry during the thirties can be discussed most conveniently in relation to the course of events during the depression. The depression was a world-wide phenomenon. In relation to India its most important aspect was the rapid, absolute and relative, fall in the prices of agricultural products. An external event connected with the depression which vitally affected the Indian economy was sterling's going off gold in September 1931. Though we have no direct data in relation to the effects of the depression on the incomes etc. of the agriculturists there are some indicators that these were lowered to a considerable extent. The most important of these is the official calculation regarding the fall in the value of agricultural production of certain Indian provinces. The extent of the fall was not uniform. This was due to the prices of some agricultural products having fallen much more precipitately than those of

Value of Total Production of the Principal Crops in each Province (in lakhs of Rs)

Provinces	1928–9	1931–2	1932–3	1933–4
Madras	1,80,78	1,01,25	99.33	83,17
Bombay	1,20,52	66,56	83,86	60,52
Bengal	2,32,59	1,06,71	90,54	95,56
United Provinces	1,40,52	92,21	91,01	85,65
Punjab	76,78	37,49	48,53	40,11
Burma	63,38	29,20	29,45	23,26
Bihar and Orissa	1,35,17	71,05	56,55	54,63
Central Provinces	68,77	32,42	35,40	30,33
Total	10,18,51	5,36,89	5,34,67	4,73,23

[7] K. G. Sivaswamy, *Legislative Protection and Relief of Agricultural Debtors in India*, chap. iii (1939).

others. Broadly, the food-grains fared the worst. However, even in the most favourable cases the extent of the fall in value suffered within a couple of years was very large indeed. The actual effect on the agriculturist of the fall in prices would depend on a variety of factors. The fall would affect directly the marketed produce. To the extent that the agriculturist's economy was a subsistence economy the fall in prices would not directly lower its real worth. However, even with a large element of subsistence economy certain items of costs would have to be incurred in cash and some domestic requirements satisfied with cash outlay. Many of the items of costs would be rigid, such as the land revenue, and the rental and interest charges when payable in cash. This would involve a larger proportionate share of the crop being sold than before for meeting cash liabilities. Also a steeper fall in prices received by the agriculturist relatively to those paid by him would bring about the same result in relation to necessary cash outlays. Little direct information is available regarding the condition of the agriculturist during the depression. Prof. Brij Narain's analysis of some Punjab data indicates how rigidity of land revenue payments led to greater borrowing on the part of cultivators for paying it and how the rigidity of a cash rental payment entirely ruined the tenant class.[8] In the absence of direct information regarding the effects of the depression on agriculturists other data regarding his condition during the period have to be examined. Before examining the data it is necessary to review briefly the various steps taken by Government in India to meet the situation created by the depression.

Government measures to counter the effects of depression may be divided into two classes (1) positive and (2) negative. Positive measures were those which aimed at reorganization of the economy or at reflation. The New Deal embraced both types. Many examples of other positive measures adopted by individual countries were devaluation, programmes of rehabilitation of special areas or activities, constituting market pools, etc. No measures of this type were considered in India. The currency and exchange policy of the country was dic-

[8] Brij Narain, *India in the Crisis*, chap. i (1934).

tated by reference to English interests and the extent of devaluation was limited to that resulting from sterling going off gold. No measures were taken or even contemplated to support prices of agricultural products; action in the sphere of marketing was confined to initiating a series of marketing surveys. An interesting exception to the generally negative attitude of Government is afforded by the Crop Planning Conference held in Simla in 1934. The following extract from the last paragraph, 'The Conference in Retrospect', of the official publication regarding the Conference gives an idea of the genesis of the Conference:

> The rapid fall of prices of agricultural produce in India, ever since the depression commenced about four years ago, had naturally set people thinking as to its causes. The first prophecies that the depression would soon pass having proved untrue many people began to wonder whether, the fall in the price of agricultural commodities might not be due to India over-producing some of her principal crops, notably rice and wheat. This feeling found expression at the Provincial Economic Conference held in April 1934. The material prepared for the Crop Planning Conference led that body to the conclusion after expert scrutiny that there is no actual over-production at present of any crop, except, perhaps of, jute.[9]

During the discussions at the Conference proposals that areas under particular crops be restricted were naturally opposed by representatives of provinces in which they were predominant. There was general agreement on the need of encouraging diversification where this was possible and even protective duties were favoured in special circumstances. However, the Conference discussed no matters other than those connected with acreages under crops, and issues such as that of stabilization of agricultural prices and that of marketing pools were not even raised at it. Therefore, it was highly infructuous and did not lead to any immediate action on the part of Government and did not influence long-term economic policy.

Among negative measures may be included all those which attempted to mitigate the effects of the fall in prices on the

[9] *Proceedings of the Crop Planning Conference held at Simla*, p. 15 (1934).

condition of the agriculturist. In India the two main burdens which could be alleviated were (i) revenue and rental charges and (ii) debt. As to the revenue demand of Government, it was only in the United Provinces that a radical step was taken. In this province remissions were immediately granted on a large scale and Government went so far as to consider whether it would be possible to adopt a permanent scheme of fluctuating assessments and rents to meet major variations in prices. In most other provinces nothing special was attempted in this regard, only some adoptation in the older system of suspensions and remissions was made to meet the needs of the price situation.

In most countries the preliminary step in relation to debt was the declaration of a moratorium. The nearest approach to a moratorium in India was the notification in 1932 by the U.P. Government that the execution of decrees in cases in which the civil court had ordered sale of agricultural lands should be transferred to the Collector. The Collector was authorized to adjourn all sales where the price offered was unfair. In the Central Provinces the Government issued instructions in 1933 and 1934 that the sale of land should be restricted only to unavoidable cases. No similar steps were taken in other provinces.

After the moratorium came the adjustment and scaling down of debts. In this respect also legislation in U.P. was more speedy and many-sided than in other provinces. It prevented sale of land by ordering instalment payments, scaled down interest, helped in some measure the small agriculturist to redeem his mortgaged lands, and also adopted in some cases a measure of compulsory scaling down of debt by providing for transfer of land at pre-slump values. The operation of these provisions of the United Provinces Acts was compulsory. In other provinces attempts were made to scale down and adjust debts by providing for conciliation between debtor and creditor. The main examples of this approach were Debt Conciliation Acts passed in the Central Provinces (1933), Punjab (1934) and Bengal (1936). Under these Acts Conciliation Boards were set up for small local areas which were authorized to bring about an agreement between creditor and debtor and to register it. Under the earliest of

these, the C.P. Act, the main power through which the Boards could persuade creditors to agree was that 'where the debtor made the creditor a fair offer which he might reasonably be expected to accept, the Board may grant the debtor a certificate'.[1] The grant of a certificate imposed certain disabilities on the creditor who refused the offer in subsequent proceedings in law courts. This device was, with certain modifications, adopted in the later legislation in other provinces.

The conciliation legislation is claimed to have had the most successful results in the Punjab. 'Conditions in the Punjab were extremely favourable for a voluntary conciliation of debts in view of the wide range of exemptions of property provided by the indebtedness and other Acts rendering recovery of even secured debts practically impossible.'[2] It was claimed that by 1940 conciliation had been taken advantage of by very large numbers and that the debt claims had been brought down by about 60 per cent in the process of conciliation. The results of the Central Provinces Act of 1933, as reported at the end of 1939, were that debt claims amounting to Rs 15·6 crores against 1 lakh debtor applicants had been brought down to Rs 7·75.[3] A major criticism of the operation of the Act in the Central Provinces was that it benefited chiefly the large cultivators and that to some extent even non-cultivator debtors took advantage of it. The working of the Bengal Act has been subjected to much criticism because of the defective working of the village boards which were a prominent feature of it. Official statistics indicate that by 1940 applications of 14·5 lakh applicants had been disposed of and that a debt of Rs 26 crores had been scaled down to Rs 17 crores.

As indicated above, the United Provinces legislation provided chiefly for moratoria and for the protection of the rights in land of the agriculturists. The provision made for adjustment affected chiefly the more substantial land-holders. Therefore, the effect of the legislation in U.P. was evidenced chiefly in the reduction, in the late thirties, of mortgage debt

[1] Sivaswamy, op. cit., chap. x.
[2] *All India Rural Credit Survey Report*, vol. I, part i, p. 211.
[3] *Report of the Agricultural Finance Sub-Committee 1944-5*, p. 22.

and in a reduction of suits for arrears of rent and civil suits for money and movable property over the high figures attained in the depression years. Such action as was taken in any of the other provinces appears to have had little effect on the progress of events during the depression.

The depression may be said to have lifted by 1936-7. It was in this year that a large constitutional advance was made in India and popularly elected ministries with relatively large powers came into office in the provinces. The ministries naturally addressed themselves immediately to agrarian problems. The steps taken by them in relation to tenancy and consolidation have already been noticed. The problem of debt had been rendered acute by the depression everywhere and it received considerable attention. The events of the depression and the pattern of measures adopted to combat its effects naturally influenced the initial approach of the new ministries.

As a result, in major provinces such as Bombay in which no effort had been previously made to tackle the problem, legislation was undertaken in this behalf and in other provinces like Madras and U.P. further and more vigorous effort was made. Experience of legislation passed during the depression led to a new development after 1936. This was legislation to scale down debts compulsorily. The main provisions of these new Acts were compulsory reduction in interest or in interest and principal of old debts in a prescribed manner, payment of adjusted debts in suitable instalments, redemption of mortgages and protection to a minimum proportion of a debtor's lands and other assets like produce, dwelling house, etc. The first of such Acts was the Madras Debt Relief Act (1938). Agricultural Debt Relief Acts making provision for compulsory scaling down of debts were also passed in U.P. and in Bombay in 1939. These Acts could not, however, materially affect the situation before the beginning of the second world war.

The situation in relation to agricultural debt on the eve of the war represented the combined result mainly of the depression and of the legislation undertaken in various provinces. It is difficult to generalize in this matter as the incidence of the depression as well as the extent and effectiveness of state action differed from region to region. The All-India

Rural Credit Survey, after setting out the available statistical and other evidence in this behalf, makes the following observations:

Finally, a broad summary of the trend in indebtedness in the period since the time of the Provincial Banking Inquiry Committees may be attempted. Data available on the trend in indebtedness during and after the depression period indicate the maintenance of a high level of debt throughout the thirties as compared to the level in 1929-30. The general dynamics of the debt situation during this period, according to many observers, was characterized chiefly by the inability of the cultivator to repay the principal amount of old debts in most cases and default even in the payment of interest charges to a certain extent. Fresh borrowing during this period would appear to have been reduced to a minimum. The change in the level of debt would, in these circumstances, be a function of accumulated interest on the one hand and forced liquidation of debt by sales and foreclosures on the other. Actual reduction in debt through official measures also played, as indicated, a significant part in two or three States such as Bengal and the Punjab. The various Acts passed in many States, providing for a protection of the person and a minimum portion of property of the cultivator needed for his maintenance, while reducing the amount of debts sought to be recovered by sale and attachment, might have at the same time helped to maintain those debts in respect of which creditors contented themselves with biding their time until the arrival of a more opportune moment for recovery. As a result of the working of the various forces, therefore, the thirties probably witnessed some expansion in the monetary burden of agricultural debt.[4]

The most important positive measure adopted to deal with the problem of debt was the effort at building up a rural co-operative credit system. The early history of this has been already sketched. The 1912 legislation had widened the range of societies falling under the Co-operative Societies Act, both in relation to the types of primary societies and unions and other organizations of primary societies. Government appointed in 1914 a Committee (the Maclagan Committee) to consider afresh the whole structure of the movement. Co-

[4] *All India Rural Credit Survey*, vol. I, part i, pp. 225-6.

operative developments after 1915 were largely moulded by the recommendations of this Committee. However, constitutional changes in 1919 transferred legislation in relation to co-operation to the provinces and many provinces passed in the twenties special legislation in this behalf whose provisions differed from province to province in many respects. The basic structure of co-operative organizations remained, at the same time, uniform.

The organization of the movement in India is three-fold. The foundation is the primary society. The primary societies are financed and looked after usually by the district central bank and at the apex of the whole system came the provincial bank. Between the primary society and the central bank there was in many cases an intermediate organization—either a supervising union or a guaranteeing union or a banking union. The guaranteeing unions were formed not only for supervising the working of member societies but also for mutually guaranteeing their loans. Except in the province of their origin—Burma—they have not been very successful. The experiment with guaranteeing unions in the Central Provinces ended in disaster and in the Bombay Presidency, where this was the form first introduced, they did not prove a success, and it was decided in 1925 to start supervising unions instead. The supervising union is a combination of primary societies who come together and jointly appoint a trained and competent supervisor to look after the working of member societies. This form is chiefly to be found in Madras. The banking union—a Punjab experiment—combines banking and credit business with supervision. These intermediary unions were not general except in Madras, Bombay and the Punjab, and elsewhere the central banks themselves undertook all the supervision of the primary societies. The Agricultural Commission thought it desirable that finance and supervision should be under separate control but this is a point of view that has not universal support.[5] A noteworthy feature of the Indian co-operative movement is the position of the official Registrar of each province in it. Under the Co-operative Societies' Act he has consider-

[5] B. Abdy Collins: 'The supervision of Primary Societies' in *The Bombay Co-operative Quarterly* (December 1928).

able powers of inspecting registered societies, causing inquiries to be made into their condition, settling internal disputes and, in specially grave cases, of winding up. The Government department also conducts an audit of all the registered societies. Thus the responsibility for the proper guidance of the movement rested on Government to a considerable extent.

The progress of the co-operative movement in India during the twenties was considerable though uneven. The Agricultural Commission made some calculations to assess the extent to which the rural population had been touched by the movement in the different provinces. According to these the proportion of members of agricultural societies to families in rural areas in 1926-7 was 10·2 per cent in the Punjab, 8·7 per cent in Bombay and 7·9 per cent in Madras. In all the other major provinces the proportion was less than 5 per cent, being only 1·8 per cent in U.P. Co-operative societies furnished at this time only a part of the borrowing needs of their members. In consequence, the proportion of total debt transactions of agriculturists covered by the co-operatives was negligible.

As the demand for credit at reasonable rates was the primary need of the cultivator the primary agricultural credit society was by far the most important class of co-operative societies in India at this time. However, it was realized from the beginning that the work of the credit society must be supplemented by other societies to obtain a fair price for the produce that the cultivator sells and to make purchases of his requisites economically. Formation of sale and supply societies was, therefore, encouraged. The actual results in these other directions were very meagre and the chief notable development in co-operative marketing in the twenties was the organization of cotton sale societies in Gujerat and Karnatak.

The overleaf table sets out data relating to the progress of co-operative societies in India from 1914 to 1939. It will be observed that progress in numbers as well as in financial resources was rapid, particularly between 1919 and 1930, and that the rate of progress slackened considerably during the thirties. The basic initial defect of the co-operative movement in India had always been that it had grown under external,

Progress of Co-operative Societies in India

	Average 4 years 1906–7 to 1909–10	Average 5 years 1910–11 to 1914–15	Average 5 years 1915-16 to 1919–20	1914–15	1919–20	1924–5	1929–30	1934–5	1939–40
Central (& Supervising)	17	231	942	397	1394	1808	1880	1415	1131
Number of Members	1,987	23,677	100,896	36,808	144,419	218,243	247,524	231,878	235,776
Agricultural	1,713	10,891	25,873	16,016	36,716	51,716	92,051	93,160	118,988
Number of Members	107,643	459,096	902,930	664,446	1,181,718	2,031,206	3,124,234	3,011,698	4,190,909
Non-Agricultural	196	664	1,662	914	2,662	4,183	10,526	11,436	16,760
Number of Members	54,267	89,157	226,031	123,215	339,420	598,624	1,060,661	1,397,939	1,890,661
Working capital of all societies	6,812	54,842	151,847	89,662	214,071	481,929	895,178	968,852	1,070,989

chiefly official, patronage and guidance. Some of the most notable successes of the movement were recorded in districts where the executive head had evinced a personal interest in its growth. The non-official sponsors were also largely outsiders. Progress was thus often illusory, its maintenance being dependent on constant outside support and vigilance. The following extract from a report of the Bombay registrar of co-operative societies exemplifies the general situation. It may be noted that the description relates to a province where the movement was supposed to be doing much better than elsewhere. The Registrar writes: 'I am afraid the average Deccani cultivator has not passed the stage at which he regards the society merely as an alternative to the Sowcar. He has always in the past borrowed all he can from the Sowcar, and when the co-operative societies have come into being, and he finds that he can get easier rates of interest, he borrows more than he ever did and we have facile credit in its worst form.'[6] The reaction to this attitude on the part of members was intensive concern displayed by the management of the society in securing its loans, and rigid conditions and limits regarding borrowing by individual members imposed by societies and regarding borrowings of societies laid down by central banks. The result was that the possibility of co-operation replacing the moneylender-trader system never emerged and the co-operative credit society remained merely a source of supplementary credit to the member-cultivator.

The co-operative movement in India was very severely tried by the impact of the depression. Even in countries where it had previously been organized on very sound lines, co-operation experienced some setback during this period. It was, therefore, not surprising that the movement should suffer specially severely in India. An added consideration was that while the agriculturist and the co-operative societies were almost everywhere else helped by the state to weather the storm, in India no such help was forthcoming and everybody was left much to his own devices. The result was that, especially in those provinces in which the organization had previously been built up in a defective manner or where its

[6] *Report on the working of the Co-operative Societies in the Bombay Presidency, 1926-7*, p. 18.

financial strength was low, the movement virtually broke down. Such, for example, was the case in Berar. Where the movement had always been under considerable official surveillance or where its financial assets were large, the results were not so disastrous. Everywhere, however, a number of the weaker units had to be liquidated, the recoveries declined and the overdues increased in alarming proportions.

The depression and its aftermath emphasize some lessons in respect of co-operation in India. Firstly it indicated that over large areas the initial defect of the movement—not being properly interwoven with the pattern of rural life—still persisted. It was looked upon as and largely remained an external force. As such it was not adequately equipped to meet the crisis or help the agriculturist. Secondly it was also made clear that in spite of this partial failure it remained the only hope of the people. Thus when the popular Governments began to investigate the problem of agencies in carrying out their programmes of rural development, they decided in the large majority of cases to depend upon the nucleus of the co-operative organization already in existence. Thirdly it was found that even in the provinces in which the movement was strongest, its existing strength and scope were too small for it to carry out the work of a widespread or comprehensive reconstruction programme. The problem was thus to develop the existing organization at a pace rapid enough to meet adequately the needs of a national rural policy.

The depression emphasized another weakness of the co-operative movement in India which had not so far been brought into the open. This was the handicap imposed by the lack of supporting and complementary official policy. In most other agricultural countries prompt relief given by the state by way of moratoria and debt adjustment to cultivators was accompanied by credit assistance to co-operatives. More important was state action in relation to agricultural prices and agricultural marketing. Measures taken to support agricultural prices usually stabilized incomes of agriculturists while improvement of marketing organization, particularly state aid to widen the scope of co-operative marketing, had the same effect indirectly. In India no financial aid was

given by the state to co-operatives, there was no attempt at stabilizing agricultural incomes and Government action in relation to improvement of marketing extended only to initiation of a series of all-India surveys of the marketing of individual commodities. With the advent of provincial autonomy measures for regulation of marketing were contemplated or passed in some provinces. Most of these were modelled on the Berar Cotton and Grain Markets Law (1897). The wide adoption of a system of regulated markets for all important crops on the lines of this legislation was recommended by the Royal Commission on Agriculture. However, till the beginning of the second world war the only effective extension of it outside Berar was by the Bombay Act of 1927 which set up regulated markets for cotton in that province.

The Royal Commission on Agriculture noted that markets in India were numerous everywhere but that they varied greatly in character and importance. At one end of the scale were the elaborate modern *mandis* of the Punjab canal colonies and at the other end were small village markets which were often little more than open spaces with accommodation of a very temporary character. In Berar cotton markets were set up and regulated under the law; in Bihar and Orissa all markets were privately owned, on which rents and tolls were levied by the landholder. The extent, timing and place of marketing also differed from crop to crop. In the case of the main food-grains the cultivator usually sold what remained after reserving what was necessary for his own consumption. However, he was not always able to do this. In many areas with more primitive economies or chronic scarcity conditions the burden of debt on the average cultivator compelled him to sell the larger part of the crop at harvest and reborrow in grain or cash for domestic consumption later in the year. In case of commercial crops practically the whole crop was marketed at once, immediately after harvest. Typical arrangements were described in the village surveys conducted contemporaneously. One Madras survey gives the following account. 'All millet crops and pulses are consumed and dealt with locally. Paddy and coriander seed are bought by dealers at the spot and consumed

in the district, while cotton and senna are sold partly at the spot and partly taken to Tuticorin. These were both export crops. The senna crop and partly cotton also was bought by dealers before harvest.'[7] The description given by the Royal Commission on Agriculture of conditions of marketing in the main export crops, such as cotton and jute, exhibited great variety of conditions and considerable lack of order. In Khandesh, for example, even though the cultivator was found to be comparatively free to dispose of his produce as he pleased the commonest method of sale was in the village to a visiting trader. There were some large markets to which the actual growers carted their unginned cotton to a large extent. However, conditions in these were unregulated and the cultivator was at the mercy of the trader. Between the cultivation of jute in Bengal and the export market on the one hand and the jute mill on the other there may be as many as four agencies. The Royal Commission on Agriculture summarized the position relating to marketing in the following terms:

> It has, we think, been established that, where the cultivator is in a position to dispose of his produce in a market, however limited its scope and badly organized its character, he obtains a much better price for it, even when the cost of transport is taken into consideration, than when he disposes of it in his own village. He may be compelled so to dispose of it because communications with the nearest market are not satisfactory or because he has no cattle and carts of his own by which to transport it, but there can be no doubt that it must be often his indebtedness which compels him to resort to the village trader and to accept the terms dictated by the latter.[8]

During the inter-war years, no general change in these conditions came about. In special circumstances, like those of the Punjab canal colonies, Mr Darling noted the 'tendency of the colonist to dispense with the local bania and take his grain to the market himself'.[9] This could indicate

[7] Slater, *Some South Indian Villages*, p. 67 (1918).

[8] *Report*, p. 388.

[9] M. L. Darling, *The Punjab Peasant in Prosperity and Debt*, p. 184 (1925).

the existence of exceptionally favourable economic circumstances which were found rarely and which could not be maintained through the depression of the early thirties. The only other factors making for a change in the long run were legislation for setting up regulated markets and the spread of the co-operative sale societies, of which the most notable examples before 1939 were the cotton sale societies in Bombay Presidency.

Livestock holds a vary important place in the economy of the Indian cultivator. The Agricultural Commission dealt at length in their report with the problem of animal husbandry. The Commission's analysis of the cattle situation in India may be summarized as follows.

The conversion of the best grazing lands of the past into arable lands for meeting the needs of a growing population has made the problem of maintaining the quality of cattle very difficult. There has been consequently a considerable deterioration in quality, which has resulted in setting up a vicious circle. The number of cattle within a district depends upon, and is regulated by, the demand for bullocks. The worse the conditions of rearing efficient cattle are, the greater the numbers kept tend to be. Cows become less fertile and their calves become undersized and do not satisfy cultivators who, in the attempt to secure useful bullocks, breed more and more cattle. As numbers increase or as the increase of tillage encroaches on better grazing lands, the pressure on the available supply of food leads to still further poverty in cows; and a stage is reached when oxen from other provinces or male buffaloes are brought in to assist cultivation. This stage has been reached in Bengal. The extension of cultivation not only diminishes the grazing lands available but also increases the number of bullocks required for tillage purpose. The problem is gigantic. Its solution lies in the increase of fodder supply and the selection and improvement of local breeds. The food problem can be solved by undertaking dry fodder storage, by a better utilization of fodders and by the introduction of new fodder crops. Since the disappearance of the old nomadic cattle-breeders of India no careful breeding is practised and the work of improving

and maintaining the quality of the local breeds now naturally devolves, in the absence of private breeders, on government cattle farms. The deterioration is, however, so general, its evils so widespread, and the general economic situation so accentuates them that it will obviously be long before the process of deterioration is even arrested.

Till 1939 no effective steps had been taken to tackle or to begin to tackle the serious situation regarding fodder and livestock described by the Agricultural Commission.

A very important change took place in the planning and administration of irrigation works on account of the introduction of the Montford Reforms. Irrigation now became a provincial transferred subject. The classification of irrigation works was also changed at the time of the transfer. Henceforth all works, whether major or minor, for which capital and revenue accounts were kept, were classified under only two heads: (i) productive and (ii) unproductive. The latter was a more non-committal term than the older 'protective'.

Many of the projects undertaken on the recommendation of the Irrigation Commission (1902) were completed during and soon after the war. Further ambitious schemes were also taken in hand. Among the works under construction before the war, the most important was the Triple Canals project in the Punjab. This was a very large project consisting of three connected systems of canals of which the Upper Chenab canal was opened in 1912, the Lower Bari Doab canal opened in 1913 and the Upper Jhelum canal opened in 1915; though different sections were completed earlier the whole project was not fully completed till 1917. The most important among the unproductive works were the Girna, Godavari, Purna and Nira works in the Bombay Deccan. The first two of these were completed during the war or soon after; the latter two were completed in the middle twenties.

Many important major irrigation works were undertaken at the end of the war or soon after. The most important of these were the Sukkur Barrage project in Sind which has been described as 'the greatest irrigation work ever under-

taken',[1] the Sutlej Valley project intended to make secure and extend on a large scale the area under cultivation in the southern districts of the Punjab and in the adjoining states of Bikaner and Bahawalpur, and the Cauvery Reservoir scheme of which the main feature was the dam on the Cauvery at Mettur. The Cauvery-Mettur project was undertaken to improve the fluctuating water supply of the existing system of irrigation in the Cauvery delta and also to extend irrigation in a large measure in new areas. Another important scheme was that of the Sarda Canals in the United Provinces. This was intended to provide irrigation facilities to large parts of Oudh and Rohilkhand. All these works were completed between the years 1932 and 1935.

During the quarter-century preceding the second world war there was considerable increase in the area irrigated by Government works in India. The following table gives comparative figures (in thousand acres) for years at the beginning and at the close of the period.

	1914–15 to 1916–17	1938–9	% area irrigated by govt. works to total area sown in 1938–9
British India (Excl. Burma)	24,287	31,648	15.45
Of which: Madras	7,279	7,396	20.29
Sind	3,651	4,693	86.45
United Provinces	3,141	4,769	14.96
Punjab	8,510	12,196	42.82

From details given regarding particular provinces it will be observed that over 90 per cent of the total area irrigated in British India (excluding Burma) in both periods was concentrated in four provinces. The extension in irrigation came about in three of these, viz. Punjab, Sind and the United Provinces. In the fourth, Madras, the major project completed, the Cauvery-Mettur greatly improved the reli-

[1] *Triennial Review of Irrigation, 1921-4*, p. 12.

ability of previous irrigation but had not extended the area under irrigation much by 1939. The table also indicates the proportion of the area sown in each of the provinces which were irrigated by Government works in 1938-9.

The bulk of the area irrigated by Government works was irrigated by major works. Minor works of small size and of limited importance did not figure importantly in Government plans. The Agricultural Commission considered that the minor works 'had not in the past received the attention that they deserved from Government' and that much could be done to promote their development. It may be noted in this context that, in the thirties, the Government began in the United Provinces experimentation with a programme of construction of tube-wells.

The most important source of irrigation to be developed through private effort was that of wells. The Agricultural Commission found that the area irrigated by wells in India had not increased during the first quarter of the twentieth century. This was partly explained by the shrinkage of area irrigated by wells where canals had been constructed. Even after making due allowance for this the Agricultural Commission held that there had been little progress in sinking ordinary wells and that this was disappointing and called for inquiry. The Commission specially drew attention to the problem of a large proportion of disused wells in many areas. According to the Agricultural Commission the area irrigated by wells in British India in 1902-3 was 11·6 million acres; in 1925-6 it was 11·7 million acres. There were great fluctuations in the intervening period and the acreage was over 14 million in years of very severe drought. The average of the area irrigated by wells in British India for the five years ending 1938-9 was 12·3 million acres. Most of the area was concentrated in three provinces—the United Provinces, Punjab and Madras. In 1938-9 the area irrigated by wells in British India was 13·25 million acres of which 5·55 million were in the United Provinces, 4·75 million acres in the Punjab and 1·39 million acres in Madras.

CHAPTER XVI

Industrial Development, 1914-39

IMMEDIATELY after the beginning of the war there was a setback to the prosperity of a great many industries, e.g. cotton, coal, manganese, etc., though in the case of some others, such as tea, this was not felt. This setback was only temporary and soon, with the general rise in prices, profits in industries began rapidly to rise. The industries working chiefly for export were, no doubt, continuously handicapped by the shortage of shipping tonnage and in some cases the shortage of railway wagons. The shortage of tonnage was, however, more acutely felt by agricultural products than by manufactured goods or minerals, and the considerable internal demand for the latter group in wartime made their position specially secure. As in all other belligerent countries Government control over economic activities was another important feature of the war period. This affected the different industries in different ways. In some products there was a total prohibition of export and large Government purchases at fixed prices. In the case of coal the embargo and the purchases by Government also necessitated a control of the supply and distribution of coal to the various industries through the Coal Transportation Officer. In many other industries, e.g. jute, manganese, mica and tea, large purchases on Government account helped to add to the prosperity of the industries. While the war meant to the agricultural producer chiefly a loss of old export markets, to the manufacturer it meant, as in cotton and coal, a cessation of foreign competition or, as in jute, manganese and other minerals useful for munitions purposes, the creation of a special demand. The prices of manufactured goods, as a whole, rose, while the rise in the price of raw materials was comparatively slight and wages rose little, if at all, during the war period. Further, the difficulties of importing machinery and other stores strengthened the position of existing

producers, and manufacturers in all industries made phenomenal profits especially during the later war years. The end of the war brought forth an immediate increase in demand for all sorts of goods. A rapid rise of prices took place, and with the end of 1918 there set in a short period of extraordinary industrial prosperity. The reaction, however, came immediately after and the year 1921 was one of acute trade depression. The fall in trade activity during that year was, indeed, so pronounced that even the railways felt its effects on their profits. In most industries the reaction set in by the middle of 1920, but in the cotton industry it was not felt till the year 1922.

Exchange fluctuations throughout this period played an important part in economic events. By 1917 the Government of India found it impossible to maintain the gold exchange standard and the old ratio of 1*s.* 4*d.* Owing to the rise in the price of silver, the bullion value of the rupee exceeded 1*s.* 4*d.* and in August 1917 Government definitely gave up the attempt of keeping the exchange pegged at that level. Henceforward the fluctuations in the rupee exchange depended largely on the variations in the price of silver and from 1917 to 1920 the exchange rose steadily. This did not have, however, an immediately adverse effect on India's foreign trade. The prices of important Indian products which had remained stable during the war had risen enormously by the year 1919. The famine of 1918-19, currency inflation and the enormous trade activity all helped towards bringing about this rise. The exchange, which had moved up to 1*s.* 5*d.* in August 1917, reached 1*s.* 6*d.* in April 1918. In spite of this the year 1918-19 closed with a favourable balance of trade. And in spite of the higher Indian prices and the unfavourable rate of exchange, exports in the year 1919-20 reached very high figures. This was specially the case with the raw materials for different industries such as hides and skins, raw jute, oil-seeds, dyeing and tanning substances, lac, etc. There were also large exports of jute manufacture and, because of the rise in the price of silver, the China yarn market continued strong. Imports did not rise correspondingly. chiefly on account of the difficulty of ob-

taining immediately the manufactured and other goods which formed the bulk of India's imports.

The year 1919-20 was one of enormous trade activity all over the world and the optimism of the moment, the hope of continuation of the high level of war profits, the rising level of prices, the hopes of a suddenly increased demand left unsatisfied during wartime induced Indian manufacturers to expand their output and plan large extensions. New companies were floated and large orders placed with foreign countries, especially England, for machinery and stores. These orders were being placed from all over the world and countries like Great Britain, which were the chief suppliers, were unable to meet this enormous demand immediately. The inability to get deliveries meant that orders were duplicated and there was also a lot of speculative placing of orders. In the case of India the situation was still further aggravated by the fact that a continuously rising rate of exchange further stimulated imports. The exchange rose to 1*s.* 8*d.* in May 1919 and then steadily to 2*s.* in September 1919 and reached its highest point of 2*s.* 4*d.* in April 1920. The high exchange encouraged importers and they were induced to expect a continuation of high exchange conditions by the acceptance by Government in February 1920 of the recommendations of the Babington-Smith Committee to peg the exchange at 2*s.* to the rupee. During the year 1919-20 the inability to get prompt deliveries kept the value of imports down and the fiscal year ended with a considerable balance of payments in favour of India. But already by April 1920 the boom was breaking all over the world.

The 1919-20 boom was a price boom, based on the expectation of a rapid recovery of demand from all countries of the world and a continuation of war profits and was intensified by the inflationary policies of governments and by the fact that in 1919 the productive capacity of the world had been considerably lessened by the war. As these expectations were not fulfilled the tide began to turn in all countries, beginning with Japan in 1919. Wages and other costs had rapidly risen with the rise of prices, and the continent of Europe was unable to absorb any large quantities of raw materials as its industries were not yet rehabilitated. During

the opening months of 1920 the action of the treasury in England checked the rise of prices there and the period of short-lived prosperity came to an end. In India exchange troubles aggravated the situation still further as they had intensified the boom in the previous year. The rise in the exchange rate had been due chiefly to the rise in the price of silver. In February 1920 this reached its highest point and then began to decline. This naturally affected the exchange, and from April 1920 began a headlong fall in the exchange value of the rupee. By December 1920 the rate had reached 1*s.* 6*d.* and by May 1921 it came down to the record low figure of 1*s.* 3*d.* The inability of old European customers of India to buy any large quantities of her produce, combined with the effects of the high rate of the previous year and the unfavourable agricultural conditions of 1920-1, brought exports down to a low level, while the orders placed during the previous year were now coming to hand. Thus in 1920-1 the imports of such articles as hardware, instruments and apparatus, machinery and mill-work, metals, motor cars and cycles, railway plant and rolling stock, reached record heights and continued at a high level even in 1921-2. These imports were the results of orders placed during the boom period and had the effect of still further increasing the productive capacity of industries at a time of falling demand. Amongst other imports the figures for cotton piece-goods for the year 1920-1 are especially remarkable. The average imports of piece-goods, chiefly from Lancashire, during wartime had sunk to quantities much below the pre-war level. The demand was, therefore, active at the close of the war and importers, taking advantage of the high exchange rate, had placed very large orders abroad. These high-priced goods, ordered under the influence of the boom and the expectation of a favourable exchange, began to arrive in large quantities in 1920. The exchange then began its downward slide, prosperity had vanished and the importers found themselves in most acute difficulties. These came to a head by December 1920 when the Native Piece-goods Association of Bombay decided that no importer should settle any contracts at a rate lower than two shillings to the rupee. The example of Bombay merchants was soon followed

by importers of piece-goods in Delhi, Amritsar and other centres. This step still further deepened the feeling of 'no confidence' in most commercial centres in India.

One of the first industrial movements having an all-India significance was the general wave of optimism that pervaded Indian industry in 1907, the result in a large measure of the swadeshi movement. Many schemes for starting various manufactures in India and for financing trade and industry were then floated. A general failure of the banks formed at this time, especially in the Punjab and in Bombay Presidency, was a marked feature of the year 1913. The movement denoted by these failures, however, was mainly financial and did not have a permanent effect on the industries of the country. The miscellaneous manufactures starting in and after 1907 had mostly failed earlier. The war, however, created anew conditions generally favourable to the progress of Indian industries and at the end of the war everything was in readiness for a boom. The extent of the boom was entirely unprecedented. The statistics of company floatation give some idea of this. In the year 1919-20, 905 companies with an aggregate authorized capital of about 275 crores of rupees, and in the year 1920-1, 965 companies with an aggregate authorized capital of about 146 crores, were newly registered in India. The total number of registered companies in India in 1913-14 was 2,681 with a paid-up capital of nearly 76 crores of rupees; in 1918-19 it was 2,713 with a paid-up capital of about 106 crores of rupees; and in 1921-2 the number was 4,781 with a paid-up capital of 223 crores of rupees.[1] During the war few companies were floated, but there was a considerable increase in the capital of the existing companies. During the three post-war years the number of companies increased by 75 per cent and the paid-up capital was more than doubled. Of course, most of this growth was not healthy joint-stock enterprise and in the years following there was much weeding out. But, at the moment, owing to the extraordinary optimism prevailing, the shares were freely subscribed to. There was much reckless and fraudulent floatation. The value of industrial securities, especially of the jute and

[1] These figures relate only to British India.

cotton mills and manganese and cement companies, rose extraordinarily high. The temper of the investing public is made clear by the following quotation: 'The shares of the Tata Bank were at Rs 90 premium when only Rs 15 were paid up and no reserve fund at all. The Tata Oil Mills share of the face value of Rs 100 was quoted at Rs 575 premium, even before the erection of the machinery for the working of the Mills.'[2] This might be taken as an instance of an extraordinary confidence of the investor in Tatas. But in many cases there was also considerable underhand manipulation which led the Native Share Brokers Association fervently to declare in their evidence: 'It is, however, much to be wished that Directors and agents of companies should religiously refrain from speculating in the shares of companies they manage.'[3] April 1920 was generally the peak of the boom in India. It then broke and there followed for most industries a period of depression and for the trade in general a long period of 'no confidence'.

To a certain extent the currency policy of Government was responsible for the lengthening of the post-war period of depression. The rupee, which had sunk below the pre-war level in December 1920, remained at a low level from early 1921 to early 1923. It then began to rise slowly reaching 1*s.* 6*d.* (sterling) in September 1924, approximately equal to 1*s.* 4*d.* gold, the pre-war parity. The upward movement was, however, still kept up, parallel with sterling; and thus, though nominally between the months of September 1924 and April 1925 the ratio of 1*s.* 6*d.* was kept steady, there was really an appreciation of the exchange by the latter date to 1*s.* 6*d.* gold when the gold standard was restored in the United Kingdom. The effects of this currency policy were apparent throughout these and the following years, and almost every industry, or the Tariff Board in almost every industrial inquiry, had to complain of the effects of a high exchange. The pegging of the exchange by Government at a parity even higher than pre-war may be taken as one of the factors which prolonged the period of the post-war depression.

The cotton industry of India had prospered during the

[2] *Bombay Stock Exchange Inquiry Committee Report,* Appendix 5 (1924).
[3] ibid.

opening years of the twentieth century and it continued its progress during the war years. On the eve of the war the industry was not in a very good position as it was just recovering from the shock of the 1913 bank failures, and the opening year of the war was unfavourable to both the spinning and weaving departments. However, the cotton industry by the beginning of 1916 was in a prosperous condition. The situation of the Lancashire industry was difficult, with freights high and larger revenue duties imposed on imports into India. In the home market the Indian industry thus found conditions of good demand, high prices and little competition from outside. This was also the case in neighbouring countries such as Persia, Mesopotamia, East Africa, etc., where Indian manufacturers found their markets rapidly expanding. There were certain difficulties like the high prices of stores, dyes, etc., and the difficulty of obtaining coal, but wages showed no tendency to rise and on the whole costs kept well below the level of prices of yarn and piece-goods. As in other industries the difficulties of obtaining machinery, etc. prevented any large increase in production units. There was no increase in the number of spindles at all, while the number of looms increased by about 15 per cent between 1914 and 1920. Exports of Indian yarn were already in a stationary condition before the war and during the war years transport difficulties and the competition of Japan and of the newly established Chinese spinning industry in India's chief yarn market, China, resulted in reducing yarn exports to a very low level. The keen demand for yarn in the Indian market also led to a neglect by Indian producers of the foreign market. In spite of this the total production of yarn actually increased slightly during the war period, as Indian mills were producing greatly increased quantities of piece-goods. The production of woven goods by the Indian mills increased by 46 per cent between 1914 and 1920.

Imports of piece-goods fell from an average of 2,632 million yards per annum during the quinquennium preceding the war to an average of 1,841 million yards during the war years. The imports of piece-goods were usually of the higher quality and a fall in these led to an accentuation of the tendency noticed before for the Indian industry to increase the pro-

duction of the better class of goods. The production of coloured goods in particular increased during the war period by more than 50 per cent over the pre-war average. The broad tendencies noticed during the previous period, that of larger attention being paid to the production of piece-goods than of twist and yarn and the turning out of a finer quality of goods, were further advanced by the conditions of the war period.

Both during the war and in the quinquennium following the war, the total consumption of cloth as well as the average quality of cloth consumed in India were well below the pre-war level. The demand for the finer qualities before the war was met almost entirely by imports, which were very considerable. During the war period these imports were checked in a large degree and the demand thus left unsatisfied had to be filled by Indian production. This was done by a large production of coarse goods and by a more than proportionately increased production of finer varieties. Though the production of counts below 20s during the war period was much below the pre-war average, the exports of yarn having fallen to even a lower level, the total quantity of yarn of these counts retained in the country was actually larger than the pre-war average.

The post-war boom in the cotton industry was of a much longer duration than the boom in other industries. In the case of the cotton industry, the boom was based, at least partly, on a genuinely increased demand for cloth. The net amount of cloth available in India for consumption during the pre-war quinquennium, excluding handloom products, was an annual average of 3,567·6 million yards, while the similar figure for the war period was 3,024·5 million yards. There is reason to believe that the production of handlooms also decreased during the war period. While in the pre-war period, the markets for Indian and English goods were mainly separate, the expansion of the industry and its tendency towards the production of finer goods was increasing the sphere of competition.

The war gave a real opportunity to the Japanese industry which was seized eagerly. From 1916-17 imports from Japan of cotton goods into India began to rise very rapidly. This

rise in imports was not felt by the Indian industry at the time, as the amount of these imports was not very considerable, and the diminution in the imports from Lancashire had left a large void in the supply. For the industry, the exchange fell at an opportune moment, with the result that the price of cotton manufactures in India did not decline with the prices of other commodities. Though the prices of piece-goods abroad were falling, in the case of imports of those into India, the rise was neutralized by the continuous fall in the exchange and it was not till 1921 that a decline in cloth prices in India really set in.

Continued expansion in productive capacity was a marked feature of the history of the Indian cotton industry during the inter-war years. The following table sets out the relevant statistics:

	No. of mills	No. of spindles ('000)	No. of looms ('000)	Cotton consumed ('000 bales of 382 lb. each)
1914	271	67,78	1,04	21,43
1920	253	67,63	1,19	19,52
1925	337	85,10	1,54	22,26
1930	348	91,24	1,79	25,73
1935	365	96,85	1,99	31,23

An important feature of this growth was the much larger relative growth in the number of looms than of spindles. While the progress in productive capacity appears steadily upwards, the production from year to year fluctuated violently, reflecting the considerable variations in fortunes experienced by the industry in the two decades. Another noticeable change was in the distribution of production units and production capacity in the country. In 1914, there was very heavy concentration of both in Bombay city and Island. In the following quarter-century such growth as took place in the Bombay city industry was extremely slow but the growth was rapid in Ahmedabad and in the rest of India. There took

place during the period also some change in the characteristics of the final products of the industry.

The general direction of the progress of the cotton mill industry of India has been that from an industry producing chiefly coarse yarn for domestic and foreign consumption to one which supplied the total internal demand for all kinds of cloth and yarn and also became ultimately an important exporter of cloth. The various stages in the transformation were (i) enlargement of the proportion of looms to spindles and the emergence of the composite spinning and weaving mill as the dominant type, (ii) the loss of the foreign market for yarn, (iii) diversification of domestic production of yarn and cloth, (iv) shrinkage of the imports of foreign cloth into India and (v) expansion of the foreign market for Indian cloth.

Some progress with the transformation had been made during the first decade of the twentieth century. During those years the number of looms had increased rapidly and a much greater proportion of the mill production of yarn was being utilized in the weaving sheds in the Indian mills. Even so in 1913-14 production of cloth in Indian mills was only a little more than a third of the imports and the imports were predominantly from the U.K. The figures for 1913-14 were (in million yards): Indian mill production 1,164; Imports 3,197, of which 3,104 were from U.K. In quantitative terms domestic yarn production was very large as compared with imports of twist and yarn (1913-14 Production 682,777, Imports 44,171, in thousand lb.). However, for counts of 31 and above domestic production was, at this time, only a little more than half of imports. The China yarn market was progressively lost to Japanese and Chinese domestic production during the war period and the decline in exports of yarn continued rapidly in the twenties. The average yarn exports from India in the pre-war quinquennium were 193 million pounds of which China took nearly 170 million pounds. The war average of the exports of yarn was 130 million pounds, the post-war average 82 million pounds and this had shrunk to less than 25 million pounds within a decade of the end of the war. There was a further fall in the early thirties but a slightly revised trend towards the end of the decade took the

exports to an average of about 35 million pounds on the eve of the second world war. The remarkable qualitative change in the production of yarn during the inter-war years is indicated in the following table:

(in thousand lbs.)

	1913–14		1929–30		1939–40	
	Imports	Production	Imports	Production	Imports	Production
Nos. 1 to 20	1,254	492,693	1,047	493,382	844	668,537
Nos. 21 to 25	896	123,995	290	181,245	86	173,096
Nos. 26 to 30	3,686	42,999	395	90,579	123	137,711
Nos. 31 to 40	23,657	19,712	20,050	46,365	3,199	157,130
Above 40	7,859	2,699	9,013	15,279	7,318	81,755
Two-fold (doubles)	—	—	—	—	29,547	—
Unspecified	6,819	679	34	6,710	15	15,458
Total	44,171	682,777	43,882	833,560	41,132	1,233,687

In 1913-14 exports of yarn from India were almost 30 per cent of Indian production; in 1939-40 exports, as related to the size of the domestic production were entirely negligible. During the twenties the production of coarse yarn within the country did not at all increase. However, the decline in exports made much larger quantities of domestic production of these available for use by Indian industry. In the thirties production of coarse counts also increased considerably. For groups of counts above 26, the continuous tendency is seen to be a higher rate of increase with each higher count group. On the eve of the second world war imports had become negligible even in the highest groups of counts and were significant only in the new specialized class of two-folds (doubles). The final effect of the increase in yarn production, and of the special growth of the production of higher counts, was the greatly increased availability of yarn especially of higher counts to Indian industry in 1939-40 as compared with

that in 1913-14. This was the base of the greatly diversified production of cloth—mill and handloom—within India at the end of this period. The domestic production of cotton in India was almost entirely of short-staple varieties. This led inevitably to progressive increase of imports of raw cotton of longer staples, especially from Egypt and East Africa, into India for maintaining spinning of higher counts and production of superior cloth.

The relative position of Indian cloth production and of imports and exports is shown in the following table:

(in million yards)

	1913–14	1919–20	1929–30	1939–40
Total imports	3,197	1,081	1,919	579
Of which from U. K.	3,104	976	1,248	145
From Japan	9	76	562	393
Indian mill production	1,164	1,640	2,499	4,013
Exports from India	89	—	—	208

The statistics indicate the initial effect of the war on imports of cloth into India, the revival of imports in the twenties together with greatly increased domestic production and the reduction of imports to a virtually negligible position by 1939-40. The table also draws attention to the rise to importance of Japanese imports in the inter-war period. Exports show some quantitative increase but do not become important as related to the quantum of production within the country.

Some details of movements and events as within the general frame indicated by the statistical data may be now set out. Depressed conditions which set in after 1921-2 were aggravated by contemporary increase in productive capacity owing to arrivals of machinery and equipment ordered under influence of conditions of war and the post-war boom. Increase in capacity did not lead to proportionately increased production because of development of idle capacity within the in-

dustry. The existence side by side of installation of new units and extension of capacity of old ones, with non-utilization of installed plant and machinery on a significant scale, was witnessed even after the immediate post-war years. This was the result of an important feature of the situation within the cotton industry during the inter-war years. The industry became spread out within the country and considerable divergence occurred between the fortunes of industry in various centres within the country.

An important change in official policy which vitally affected the development of industries in the twenties and after was the new fiscal policy adopted by the Government of India. The levying of protective duties now became permissible and detailed inquiries were undertaken by duly constituted Tariff Boards into conditions of all industries which applied for protection. The cotton industry, chiefly of Bombay and Ahmedabad, was among the first of such applicants. A Tariff Board for inquiring into the cotton textile industry was constituted in 1926 and reported during the next year. The advance made by India in fiscal autonomy under post-war constitutional arrangements had been earlier demonstrated by the abolition of the hated cotton excise. As a result of a vigorous agitation by the cloth industry this excise duty was suspended in December 1925 and abolished in March 1926.

The Tariff Board presented a detailed analysis of the situation of the cotton textile industry. The Board found that the Indian industry was passing through a period of characteristic cyclical depression and that this was felt specially by mills having spinning departments only and also that it was felt much more acutely in Bombay than in other centres. Among the enduring causes of the state of depression within the industry was the loss of the China market in yarn; the incidence of this was felt specially in Bombay. The Tariff Board found it impossible to express a definite opinion as to how far foreign competition could be regarded as a permanent cause of depression, though it definitely found that the competition of Japanese yarn exercised a depressing effect on the price of Indian yarn. The concrete proposals of the Tariff Board exemplified the view taken by the Board. The

main proposals were a bounty on spinning yarn of counts 32 and above, revision of the duty on machinery and mill stores, aid for the establishment of a combined bleaching, dyeing etc. plant in Bombay and aid for the development of overseas markets for cloth. The cost of these proposals was to be defrayed out of the proceeds of an additional duty of 4 per cent on imported cloth to be levied for three years. It was thus clear that the Tariff Board did not find foreign competition posing a general threat to the Indian industry. The effect of foreign competition was no doubt felt severely in Bombay, but the competition of mills from other Indian centres pressed equally on Bombay and the emphasis of the Board was on the reorganization of the Bombay industry and its effecting internal economies. As the industry spread to other parts of India proximity to local markets appreciably benefited mills in up-country centres and many of these centres had also the balance of advantage in relation to supply of raw materials. These basic handicaps to Bombay industry were aggravated by the higher labour costs in Bombay and by the overcapitalization that had taken place in the immediate post-war period. The Board found that a great expansion in the production of bleached, coloured, dyed and printed goods by mills in Bombay could help lift the industry out of the depression and that progress in this direction required all-round efforts towards reorganization and economy.

Overcapitalization in Bombay was due to the block value having been adjusted materially upwards as a result of sales of entire mills at fabulous prices. The block value in Bombay mills rose from Rs 1,798 lakhs in 1917 to Rs 4,294 lakhs in 1922 and only a fraction of this increase was accounted for by the purchase of new machinery at post-war peak period prices. Another feature of the situation was the transfer of managing agency from one firm to another at rates extremely favourable to existing agencies. This resulted in remuneration available to the new managing agents, even under normal conditions, not representing a fair return on their investment. Over 30 out of 80 mills in Bombay had been directly affected by such transactions.[4] The Bombay industry found it

[4] S. D. Mehta, *The Cotton Mills of India, 1854-1954*, pp. 161-2 (1954).

difficult to deal with this and adjustments in this matter began to be made chiefly under conditions of the acute depression of the early thirties. The high cost of labour was found to be similarly somewhat intractable.

Attempts made by millowners in Bombay to reduce the cost of labour by bringing down wages and introducing 'efficiency schemes' resulted in a series of strikes in 1927, 1928 and 1929. One consequence of these strikes was the collapse of organized representation of labour in Bombay, so that no progress could be made at standardization of wages or systematic introduction of 'efficiency schemes'.

While almost the entire inter-war period was one of relative depression and forced adjustments for the Bombay industry, this was not the case with major centres of the industry in other parts of the country. Ahmedabad, the next largest centre, grew rapidly during the twenties and at a lesser pace in the thirties. It also became, in the inter-war period, the most progressive centre of the industry in the country. The relatively large expansion in plant and equipment after 1920 led to the creation of a group of modern and well-equipped mills. The greater personal interest taken by managing agents in Ahmedabad in management of their mills resulted in economical management and because of the enterprise of some of these, Ahmedabad took the lead in the production of fine-quality goods. The labour situation in Ahmedabad was also more favourable. Arrangements had been developed within the industry for peaceful settlement of disputes and for making adjustments. One result of the difference in the total situation between the two centres was that by the beginning of the thirties the level of wages in the textile industry in Ahmedabad was higher than that in Bombay.[5]

The cotton textiles industry became located in the inter-war years in many new centres and areas. Apart from expansion in the old-established centres like Kanpur, Nagpur, Delhi and Madras, a number of small-size units came to be established in Bengal, the Central India states, in centres in United Provinces other than Kanpur and in centres in Bombay Presidency and attached Indian states, other than Bom-

5 *Report of the Indian Tariff Board re: grant of protection to the cotton textile industry*, chap. iii (1932).

bay and Ahmedabad. Perhaps the most remarkable of the new developments was the rapid growth of a dominantly spinning industry with small average-size units in Coimbatore between 1931 and 1939. Thus in spite of almost continuous difficulties the industry made continuous progress in most centres excepting Bombay.

The world depression affected the industry in two ways. Firstly through lowering of domestic demand because of the depressed condition of agriculture and secondly through intensifying foreign, especially Japanese, competition. Events originating in the political sphere led to easing the impact of these factors in the opening years of the depression. There was a strong revival of the swadeshi movement in 1930. At this time the movement was fully organized and drew in associations of millowners. Efforts were directed towards boycott of foreign cloth and Indian mills were exhorted not to use foreign yarn. Lists of mills conforming to the swadeshi requirements were published and authorized labels attached to their products of cloth and yarn. The Tariff Board of 1932 found that the Swadeshi Movement was, in part, responsible for the sharp fall in imports of foreign cloth in 1930-1, that it assisted substantially in the remarkable increase in the production of Indian mills particularly of finer counts during 1930-2 and that it helped in conjunction with protective duties in preventing a larger fall in the prices of Indian cloth of medium and fine counts.[6]

The cotton textile industry was occupied during the thirties chiefly with problems created by the depression and foreign competition. The measures taken in this behalf were chiefly agitation for protective duties and attempts at agreement with the chief foreign competitors, namely the British and the Japanese. The major recommendations of the Tariff Board which reported in 1927 were not accepted by the Government of India and the only fiscal relief obtained by the industry as a result of the Tariff Board inquiry was abolition of the import duty on imported mill-stores. However, later in 1927 Government changed the 5 per cent *ad valorem* duty on yarn to 5 per cent *ad valorem* or $1\frac{1}{2}$ annas per lb. which-

[6] Tariff Board, op. cit., pp. 173-4 (1932).

ever was higher. The Bombay industry continued its agitation for adequate protection and Government appointed Mr G. S. Hardy, Collector of Customs, Calcutta to report specifically on the question of replacing the existing system of *ad valorem* duties by a system of specific duties; he was also asked to report generally on the question of the competition of imported cotton manufactures. Mr Hardy found that the progress of imports of Japanese cloth had been rapid and uninterrupted and the Government of India was pressed to give protection to the industry on the basis of the Hardy report. Government took action in 1930; it raised the revenue duty on cotton piece-goods from 11 to 15 per cent, imposed an additional duty of 5 per cent on piece-goods imported from countries other than the U.K. and also imposed a minimum specific duty of $3\frac{1}{2}$ annas per pound on all imports of plain grey goods. Because of the revenue needs of Government, these duties were further increased in 1931 and stood at the end of that year at 25 per cent on British and $31\frac{1}{4}$ per cent on non-British goods, with specially high protective duties on artificial silk piece-goods. In spite of these measures imports of Japanese cloth continued to increase chiefly, it was said, because of the depreciated exchanges. On a representation from the millowners the Tariff Board, which was already considering the question of grant of protection to the cotton industry, was asked to report on the specific question of competition of non-British imports. As a result of a rapid inquiry the Board recommended in the middle of 1932 an increase of the duty on non-British goods to 50 per cent as a temporary measure. In its report on the general question presented at the end of 1932 the Tariff Board took a long-term view. It held that the period of protection should be for ten years and that effective protection could be given to the industry only by replacing the existing *ad valorem* duties by a system of specific duties based on weight. The Board suggested a fourfold classification of cloth as a base for the system of specific duties. The specific duties proposed by the Tariff Board were based on an estimation of the minimum below which import duty should not be reduced during the period of protection and it was suggested that revenue should be safeguarded by *ad valorem* duties varying from time to time according to the

Government's revenue requirements. No action was taken by the Government on these recommendations of the Tariff Board. The depreciation of the Japanese exchange and the increase of Japanese imports continued after the middle of 1932 and some months after the submission of the general recommendations of the Tariff Board, i.e. in the middle of 1932, the Government took another temporary measure and increased the duty on non-British piece-goods from 50 to 75 per cent.

In the meanwhile, other factors began to affect the situation and the question of the level of protection to be granted to the Indian cotton industry could no longer be considered by itself. At this time the Indian industry needed protection chiefly as against the increasing imports of Japanese piece-goods. However, in view of the Indo-Japanese Trade Convention of 1904 the Government of India could not take any specific action against imports from Japan. To clear the ground for such action the Indian Government gave notice to Japan of the termination of the 1904 convention. This led to Japan threatening to retaliate by boycotting purchase of Indian raw cotton. Negotiations were then entered into and resulted in an Indo-Japanese trade agreement, concluded in January 1934, which was to remain in force for three years. By this agreement the two countries accorded to each other the most-favoured-nation treatment reserving, at the same time, the right to vary customs duties to counteract the effects of any special depreciation of exchange rates. The customs duty to be imposed on imports of Japanese piece-goods into India was limited to 50 per cent *ad valorem*. The special feature of the agreement was, however, the limitation by quota of imports of Japanese piece-goods into India in any year and the linking of this quota to the exports of Indian raw cotton to Japan. The two basic quotas of the agreement were 325 million yards of Japanese piece-goods imported into India as against 1 million bales of Indian raw cotton exported to Japan.

The major factor in the new situation *vis-à-vis* Japan was the threat of the loss of the Japanese market for Indian raw cotton; in the case of Lancashire the factor compelling reconsideration of policy was the old one of British political

pressure. The first move in negotiations with Lancashire was made on a non-official basis and was represented by an agreement between representatives of the Bombay Millowners Association and the British Cotton Textile industry. According to this agreement, known as the Mody-Lees Pact, Indian textile interests were not to ask for duties on imports into India of cotton yarn and piece-goods from the U.K. higher than an agreed level and British manufacturers were to popularize the use of Indian cotton in the U.K. and to use their good offices in obtaining contacts for Indian mills in overseas markets.

The Mody-Lees Pact, which was denounced by Indian opinion as giving concrete concessions in return for vague promises, was followed up by negotiations between the Governments which led to the Indo-British Pact of January 1935. This pact embodied the novel principle that British industry should be given an opportunity to state its case before an Indian Tariff Board inquiring into a claim for protection by an Indian industry. It also stipulated that duties on U.K. imports into India should be no higher than required to equate their prices with fair selling prices for similar goods produced in India and that, whenever possible, lower duties would be imposed on goods of U.K. origin. The Indian Legislative Assembly turned down the agreement but the Government adhered to it relying on the terms of reference to the special Tariff Board appointed in September 1935 to review the effectiveness of the protection afforded to the Indian Cotton Textile Industry. The main recommendation of the inquiry by this Board was reduction by 5 per cent of duties on imports of piece-goods from the U.K. The recommendation was accepted and given effect to by the Government in June 1936. With termination of the Indo-British pact of 1935 fresh negotiations were started in 1937. These became protracted and the final agreement reached was given effect to only in April 1939. This new Indo-British agreement linked, as in the Japanese agreement, quotas of imports of piece-goods into India from the U.K. with exports of raw cotton from India to the U.K. However, it had another link also. This was the link of the level of imports of piece-goods from

the U.K. with the level of duties charged on U.K. imports. The result was the establishment of a sliding scale of duties on U.K. imports, apart from the variable quotas.

The Indo-Japanese agreement of 1934 was renewed in 1937 on much the same basis as the old agreement. The changes were the fixation of the quota of imports into India excluding Burma (which had been separated) and further elaboration of the division into categories of piece-goods imports.

The impact of foreign imports of piece-goods on the Indian textile industry was not as severe as the preoccupation of the leaders of the industry with this subject may suggest. The impact was chiefly felt through the level of prices. Prices fell rapidly during the first half of the thirties. However, the volume of imports in this period was about half of that during the twenties. The trade agreements stabilized the imports at the lower levels, and after Japanese intervention in Manchuria in 1931 the level of imports declined further. Japan was the really effective competitor of the Indian industry in the thirties. The price factor was too adverse for Lancashire. Prices steadied after 1934 and there was an increase in the production of Indian mills brought about by the establishment of new units and extension of old and by fuller utilization of existing capacity through the extension of night-shift working. It should, however, be noted that in this decade the year-to-year fluctuations were wide and regional variations in fortunes were also very large. Mills in the larger centres continued to advance technically. Bleaching, dyeing, and finishing departments were extended by mills all over the country and calico printing machines were installed chiefly in Ahmedabad and Bombay.

Expansion in the hosiery and the power-loom sectors during this decade created a wider market for the yarn industry. There was a rapid growth in the number of technicians and the extension of the industry in the decade was achieved at a fairly low capital cost. Industries also developed in India supplying a part of the requirements of stores and chemicals of the cotton industry. The rates of profits earned by even successful mills remained low in the decade. The onset of the depression led to a severe crisis in the industry in Bombay.

By the end of 1932, 33 per cent of the spindleage and 25 per cent of the loomage was idle in Bombay mills and a similar proportion of workers had been thrown out of employment. It was estimated that at the end of 1933 Bombay mills were operating at 60 per cent of their capacity on single shift. As a result of the crisis, out of the 82 mills in the city 11 closed down and 19 had to be taken into liquidation. The largest failure was that of the Currimbhoy group of mills which consisted of more than a dozen mills.[7] However, the industry began to recover by 1937 and its condition was fairly satisfactory on the eve of the war.

The war greatly strengthened the position of the Indian jute industry. By diminishing the possibilities of raw jute exports to other countries, it prevented any rise in the prices of raw jute, while the demand for the manufactures of the industry increased considerably on account of the wartime need of sand-bags, grain bags, gunny cloth, etc. Further, on account of prohibitive freights and the difficulty of obtaining supplies of machinery and stores, the likelihood of new competitors coming into the field was made extremely remote. Though a number of new companies were floated during this period, only some 200 looms were added to the working total.[8] The jute industry during this period worked to a very large extent to Government order, and to ensure enhanced production Government suspended the operation of certain sections of the Factory Act in the case of this industry. During the later stages of the war, exports of raw jute were prohibited except under a licence and the Indian mill consumption of raw jute increased rapidly. The price of jute, during this period, did not rise at all and the wage level also lagged behind. In the circumstances, jute mills reaped enormous profits. In spite of a phenomenal increase in the reserve and depreciation funds, the level of profits reached was incredible. The ratio of net profits to paid-up capital of the jute mill, as calculated by the Director of Statistics, was 58 per cent in 1915, 75 per cent in 1916, 49 per cent for 1917 and 73 per cent for the first half of 1918.[9]

[7] Mehta, op. cit., chap. xii.
[8] D. R. Wallace, *Romance of Jute* (1928).
[9] *Review of the Trade of India, 1917-18*, p. 21.

Immediately after the end of the war the jute industry was faced with a crisis. War orders ceased and this meant a considerable diminution in the demand, though Government at the conclusion of the war took over all existing stocks made on war account. The price of raw jute and wages could not for ever remain at a low level and they began to mount up. The high level of war profits led to new companies being floated and large extensions were projected by the old companies as soon as supplies of machinery, etc. should become available.

The production during the war years was very high. Indian jute mills during the three years 1915-16 to 1917-18 consumed over 56 lakh bales of jute annually and all the existing mills were more than fully occupied. The pace of production slackened somewhat soon after the end of the war and a sharp fall was experienced in 1921-2. The Indian Jute Mills Association, founded in 1884, had become a strong well-knit organization and it met the slack by a short-time working agreement. An agreement to work only four days in a week was adopted in 1921 and continued through many successive years. The three years 1921-2 to 1923-4 were marked by very low activity. However, with 1924-5 production activity again became brisk and in the last three years of the decade, viz. 1927-8 to 1929-30, Indian jute mills' consumption of raw jute was higher than even during the period of the first world war. In the meanwhile, however: the productive capacity of the industry had increased to a considerable extent. The expansion in productive capacity in the twenties took place chiefly in two periods. The first was during the years 1919-20 to 1923-4. This was the result of fruition of plans ot expansion or new establishments made during the war and immediately after. This increase in productive capacity accrued when the mills were already working on a four-day week and while the demand for jute products continued low. Therefore, the Jute Mills Association arrived in 1924 at a 'no extension' agreement as a result of which increase of capacity during three or four years after 1924-5 was very limited. However, with improvement of business after 1925 the attraction of the very high profits earned by existing units in the industry proved strong and units came to be estab-

lished outside the Association. These non-Association mills were bound neither by the short-term working nor the 'no extension' agreement and in spite of the very strong financial position of the Association and the mills within it and the diverse steps taken by them to curb new entrants it was impossible to stop the activities and growth of non-Association mills. As a consequence, another rapid expansion in the number of mills, looms and spindles took place in the years 1928-9 to 1930-1. The latter half of the twenties witnessed a high level of prices of jute and jute manufactures, a rapid expansion in the acreage under jute, enlarged exports of raw jute and jute manufactures and a high level of production of Indian jute mills. The position at the end of 1928 was considered so satisfactory by the Jute Mills Association that it allowed an increase in the working looms of member mills under agreement.

The depression beginning in 1929 hit the jute economy of Bengal when it was riding a high tide. The class to suffer most severely was that of the cultivators of jute. The index number of the price of raw jute fell from 100 in 1928 and 95 in 1929 to 63 in 1930 and to 49 in 1931. It continued to decline still further till it reached the level of 39 in 1934. The acreage under jute which also had reached very high figures during the years 1926-7 to 1930-1 declined suddenly to a very low level in 1931-2 and 1932-3 and made only a gradual recovery in later years. The situation of the peasant was so serious that the Government of Bengal appointed committees to inquire into the 'jute problem' in 1933 and again in 1938. Both committees paid special attention to the plight of the cultivator and considered how the growers of jute could be better organized and how cultivation of jute could be regulated. However, they also passed under review the condition of the jute mills.

The difficulties faced by jute mills at the onset of the depression, though not as large as those of cultivators, were very considerable. The difficulties were aggravated because of the recent increase that had taken place in the productive capacity particularly of the non-Association mills. In 1930 the Association tried to meet the situation by imposing a '54-hour week' on member mills; this had to be further reduced to a

'40-hour week' in the beginning of 1931 with the further provision for sealing 15 per cent of the looms. This drastic reduction caused discontent among member mills particularly as the non-Association mills would not agree to any curtailment. With increasing stocks and dwindling demand the position continued to worsen till, through the intervention of the Governor of Bengal, an agreement was reached between the Association and non-Association mills in May 1932. By this agreement the Association mills adhered to the 40-hour week with a sealing of 15 per cent of looms while the non-Association mills were allowed a 54-hour week with full complement of machinery. However, with certain specified exceptions the non-Association mills also agreed to non-extensions in the future, i.e. during the currency of the agreement. The agreement had a salutary effect on the fortunes of the industry and profits of jute mills showed improvement in 1933 and subsequent years. This improvement and the better conditions relating to prices and exports of jute manufactures made the continuance of the stringent regulation of 1932 progressively difficult. The looms sealed by the Association were released step by step between November 1934 and February 1936 and with effect from April 1936 the agreement between the Association and non-Association mills came to an end and the hours of work of Association mills were increased from 40 to 54. The breakdown of the voluntary scheme was also due to the increasing competition from mills which were not parties to it and the fear of yet further additions to the existing number of mills. This fear was well-founded and there was a significant increase in the number of mills and of spindles and looms during the five years after 1934-5. Before the termination of the voluntary agreement in 1936, attempts had been made by the Jute Mills Association to get statutory recognition for the limitations imposed by it and to have it made applicable to the whole country. However, the Government of India did not accept the proposal. In the years after 1935 the volume of production by Indian mills and exports of raw jute and of jute manufactures and their prices were not on an unsatisfactory level. However, keen competition among mills restricted their profit-making capacity and led to overproduction. Overproduction became

specially marked in 1937-8 and stocks of jute manufactures with mills rose to high figures. No voluntary agreement regarding restriction of production could be reached, and in September 1938 the Government of Bengal promulgated an ordinance for the regulation of working hours to forty-five per week and for the control of machinery. The ordinance was to continue for six months. However, in January 1939 a voluntary scheme for restriction of working hours and control of production was accepted by all members of the Indian Jute Mills Association. At the same time, the situation of the jute industry changed radically. Preparation for war had begun and the first orders for sand-bags were received by the industry from the U.K. during 1938-9.

The Bengal Jute Inquiry Committee (1938-40) made an examination of the problems arising out of the basic structure of the industry. The industry had the advantage of Bengal's monopoly of the cultivation of jute; it was highly concentrated around Calcutta and it had a strong, close-knit Association. The mills had used their opportunities wisely to build up an almost impregnable financial position, and were able to give high returns in most circumstances. Consequently, they were content with the established types of products and made no efforts in the direction of diversification of production or of widening their base of activity. Except for two or three years at the end of the twenties and of the thirties the consumption of raw jute by Indian jute mills was lower than the average of the war years 1914-18 and the jute mills always met the resulting problem by short-time working agreements. At the same time, the high returns ensured by the jute mills, their strong economic position and restrictive agreements proved immensely attractive to outside capitalists. And in spite of all efforts of the Association, new entrants forced their way in and additions to capacity were continuously made. The number of looms in jute mills increased by 70 per cent during the inter-war years while production fluctuated widely with no marked upward trend. As the Bengal Jute Inquiry Committee pointed out, the short-time agreements of Association mills produced for them results in stabilization of prices of jute manufactures which were immediately satisfactory. However, they were highly unsatisfactory

in the long run because, on the one hand, they limited the possibilities of a permanent and continuous increase in the demand for jute and jute products, and also made the position of the jute cultivator even more vulnerable, and the fluctuations in the prices of raw jute were even larger than they would otherwise have been. Moreover, because of the safe, restrictive attitude no lasting solution for the problems of the industry could be found and there was created a chronic load of overcapacity which meant a permanently higher burden of capital costs for the community.

Indian Jute Mills

Year	No. of Mills	Spindles	Looms
1918–19	76	839,919	40,043
1923–4	89	1,043,417	49,038
1927–8	93	1,105,634	52,221
1930–1	100	1,224,982	61,834
1934–5	100	1,221,786	61,387
1939–40	110	1,369,821	68,528

Source: *Statistical Abstract of British India.*

The war was, to a large degree, responsible for creating conditions favourable to the development of the mineral resources of India. The demand for munition purposes attracted the attention of the Government and of the people to the metallurgical and chemical group of 'key' industries and many new industries attained importance. The production of chromite and wolfram was given a sudden impetus owing to munition needs. In both these cases the very large increase in output and export due to war conditions were not kept up in the post-war period. The revival of the fortunes of saltpetre was also short-lived. The favourable war years were of more lasting value to the iron and steel industry. In the post-war period the beginning of the production of a series of mineral ores in Burma was of great significance. This was the exploi-

tation of tin ore in Lower Burma, and the working of the lead, zinc and silver deposits of Upper Burma where copper also occurs. Some important minerals, such as coal and petroleum, were consumed by what is known as the 'direct process'. Iron ore had been made the basis of an important metallurgical industry, but there still remained a number of others—manganese, mica, lead, zinc, tin and copper—which were all exported in the raw ore form. Mica was exported in the form of blocks or splittings and no use was made of pulverized mica, nor was the manufacture of micanite attempted, though India produced the finest quality mica and had also a near monopoly of shellac. Lead, zinc, and silver ores were exported raw to be refined. In 1920 an attempt was made to start a refinery at Jamshedpur to win zinc and sulphuric acid from the Burma ores, but it did not succeed, and for the production of galvanized steel and hardware, spelter was imported from abroad. Similarly the tin ore was exported to the Straits Settlements (now Malaysia) to be refined and the Indian tin-plate industry then imported the tin. It was apparent that India had the raw materials for the establishment of a series of metallurgical industries and the successful experiment of the Indian tin-plate industry showed that the technical difficulties of production were not insurmountable. The limiting factor seemed to be the extent of home demand.[1]

The immediate effect of the war on the Indian coal industry was to produce a shortage in demand because of the adverse effect on industries. This was, however, short-lived and the demand recovered, in the first instance, from the railways and later from industries also. However, transport difficulties now became specially acute. Sea carriage became increasingly difficult and by the end of 1915 almost all coal was carried by railways. Incidentally, the war put a virtual stop to imports of coal and all parts of the country had to be supplied with Indian coal from the Bengal coalfields. In 1917, the Government stepped in as a large buyer and requisitioned all the better coals. All these developments led to control

[1] The total Indian demand for acids was estimated by the Tariff Board to be about 12,000 tons in terms of sulphuric acid. *Reports of the Tariff Board on the Heavy Chemical Industry* (1929).

over the movement of coal and in 1917 the office of Coal Controller was created for this and other purposes. The requisitioning by Government of a very large part of the supply of better coals left a limited and inferior supply for the general public and coal prices mounted rapidly. For some years after 1917 the demand for coal was continuously in excess of supply and the expansion of the industry was limited only by the supply of wagons for carrying coal and the supply of labour for mining it. Inferior coals, whose position in the market was usually precarious, experienced brisk demand and sometimes fetched higher prices than even the better coals, during the period of Government requisitioning.

Exports of Indian coal almost ceased during the war; with the end of the war and the very high output of 1919 they tended to revive. At this time the internal demand for coal was not fully satisfied (Government requisitioning of coal was removed only in April 1920) and there was a clamour for prevention of coal exports. The Government of India put an embargo on exports of coal, except under licence, in July 1920 and the embargo continued till January 1923. By this time internal demand and prices had both fallen and the industry became concerned with recapturing its foreign markets. These markets, situated in South-east Asia, had been captured by the South African coal industry with substantial help given to it by the South African Government. The Indian Coal Committee (1925) examined the question of regaining export markets and found that it was one chiefly of quality and price. The committee recommended that the 25 per cent rebate on the freight of all exported coal granted by the East India and Bengal-Nagpur Railways in 1924 be increased to $37\frac{1}{2}$ per cent. The committee was convinced that export markets could be regained by exporting only first-class coals and recommended the setting up of a Grading Board which would issue certificates of quality to overseas buyers. The recommendations of the committee in this behalf were promptly acted upon. The extra rebate was granted and the Coal Grading Board Act passed in 1925. The following years witnessed a sharp increase in the exports of coal from India though they never reached the level of pre-war years during any year of the twenties.

Imports of coal into India, which had caused concern in pre-war years, were high only during the immediate post-war years, 1921 to 1923, when internal demand ruled high. They fell sharply after this period and in 1926 and all later years the imports of coal into India were at a much lower level than the exports of coal out of India. In this context, it should be noted that the external trade was small as compared to domestic production and consumption. In no year of the twenties was the consumption of Indian coal in India less than 96 per cent of the domestic production. Exports, which occupied a great deal of attention in the twenties, were thus negligible as compared with domestic consumption.

There was a fairly rapid increase in the production of coal in India during the war and the immediate post-war period, and by 1924 production exceeded 20 million tons. After a couple of years of stagnation production again resumed increase and reached 23·8 million tons in 1930. During the years of depression there was a sharp decrease in production. It fell below 20 million tons in 1933 and kept below the 1930 level for all years till 1937. It however shot up in the years 1937 to 1939, reaching the highest figure of 28·3 million tons in 1938. The period 1937-9 was marked both by greatly increased industrial activity within the country and a high level of exports. Exports of coal exceeded 1 million tons in 1937-8 and were more than 2 million tons in 1939-40. Except for the years 1937 and after, industrial activity within the country did not greatly stimulate demand for coal during the inter-war years.

The most notable event during this period from the point of view of the coal industry was the emergence into importance of the iron and steel industry. This and the relative importance of various internal consumers of coal is brought out by the table on the next page prepared from the data given in the Report of the Coal Mining Committee (1937).[2]

The industry had applied for protection in 1925. However, its claim for protection could not be sustained in view of the low level of imports, and the majority report of the Tariff

[2] *Report*, vol. I, p. 21.

Consumption of Coal by Various Users in India

(Thousand tons)

	Estimated consumption 1922	Estimated consumption 1935
Railways	6,186	7,293
Cotton, Jute, Paper mills and Tea gardens	2,424	2,541
Iron Industry (including engineering works, iron and steel)	2,415 (approx. 800)	5,583 (2,457)
Admiralty, Port Trusts, Bunker Coal and Inland Steamers	1,628	1,735
Brick kilns, Potteries, Cement works, etc.	437	792
Collieries and Wastage	2,471	1,220
Other forms of industrial and domestic consumption	4,521	3,721
Total	20,082	22,885

Board expressed the opinion that the coal industry had benefited to a far greater extent from the protection granted to steel than it could possibly do from any protective duty on coal. A measure specially adopted by the Government to stimulate internal demand was the setting up of the Indian Soft Coke Committee for promoting and improving the method of manufacture of soft coke. This was manufactured from relatively inferior grades of coal and was sought to be made popular as domestic fuel in Indian cities.

Production of coal in India was essentially on a small scale. During the inter-war years two trends were notable in this connexion. Firstly, every period of increased demand led to a large increase in the number of small mines and the number of small mines decreased rapidly with the onset of difficult times. Secondly, there was a marked fall over the two decades in the number of small mines and in the proportion of total coal output raised by them. This was matched by an increase

in the number of large mines and the proportion of total coal output raised by them. While mines producing less than 25,000 tons per annum produced more than 20 per cent of the total coal output at the end of the post-war boom, i.e. in 1923, the corresponding proportion in 1939 was less than 10 per cent. On the other hand mines producing more than 1 lakh tons per annum produced 34 per cent of the total output in 1923 and more than 63 per cent in 1939. Detailed statistics of the number of mines, the various classes and their share of total output for the same years are set out in the table below.

Production of Coal by Various Classes of Mines

	1920	1923	1928	1934	1939
Up to 5,000 tons					
No. of mines	248	388	171	135	190
% of total production	2·9	3·5	1·4	0·9	1·2
From 5,000 to 25,000 tons					
No. of mines	254	187	151	146	162
% of total production	16·9	17·7	9·0	8·9	8·1
From 25,000 to 100,000 tons					
No. of mines	150	175	149	137	156
% of total production	41·4	44·6	32·6	30·0	27·6
From 100,000 to 200,000 tons					
No. of mines	25	20	38	41	49
% of total production	16·5	13·4	23·4	25·2	22·8
Over 200,000 tons					
No. of mines	10	12	18	22	30
% of total production	20·2	20·6	33·6	35·0	40·4
Total No. of collieries	687	882	527	481	587
Total production (in thousand tons)	17,962	19,656	22,543	22,057	27,769

Source: Indian Coalfields Committee (1946), Appendix VII.

The high prices of the post-war period continued till 1923. There was a sharp decline in price in the year following. During the years from 1927 to 1930 coal prices were relatively stable at a low level. With 1931 began another period of

decline which continued till 1936. In 1937 prices went up suddenly and were subsequently maintained at a higher level. Profits of the bigger companies followed closely the movements in prices. However, the main brunt of the fluctuations was borne by the small collieries. Their activities aggravated the amplitude of fluctuations in prices and production. They had also more serious effects. The Indian Coalfields' Committee (1946), in reviewing production during the inter-war years, observed as follows: 'The opening up of small collieries during periods of prosperity and their closure during bad times both have a most deleterious effect on the proper exploitation of the country's resources. These collieries are generally ill-equipped and their object is to secure the easiest coal. The result, not infrequently, is that coal-bearing areas became pock-marked, with shallow small workings which may lead to unsound development in the neighbourhood, and may, as has happened in the Jharia field, be the cause of disastrous fires.'[3]

A number of inquiries undertaken during this period revealed that the practice of trying to secure the easiest coal without regard to the long-term interests of the country or the safety of workers was not confined to small collieries and that the larger mine-owners were equally guilty. The problems of conservation and improved methods of extraction were discussed at length by the Coal-mining Committee which reported in 1937 and whose appointment was largely due to serious extensions of fires in the main coalfields. The committee found that wasteful methods were followed during both prosperity and depression and that the policies and attitudes of 'managing agents' were responsible for their adoption and continuance. A contributory cause was that the system of certification by the Coal Grading Board set up in 1925, which was devised primarily for coal exports, had begun to be used in internal trade. The certificates issued by the Coal Grading Board referred to sections of seams and thus encouraged wasteful exploitation through encouraging working of only parts of seams. The main recommendations

[3] *Report*, p. 23.

of the 1937 committee were that compulsory stowing for safety and conservation be introduced and assisted to the extent of the cost of delivering sand at the pithead. For financing stowing operations, the Committee recommended that a tax should be levied on all coal and coke dispatched by rail and that a statutory authority be set up for administration of the cess and for control over all compulsory and voluntary stowing operations and also to exercise other measures of control over the working of mines. The Government accepted the recommendations of the committee in relation to stowing and a Stowing Board was created in 1938. Except for this step, no attention was paid by Government during the inter-war years to the problem of conserving the coal resources. The problem was discussed at some length by the Coal-mining Committee (1937) and specially highlighted by a minority of its members in a dissenting minute, but received serious attention only in the war and post-war period.

The history of the foundation of the iron and steel industry in India is a veritable romance. It is practically the result of the keenness and foresight of one industrial magnate, Jamshedjee Tata. There were, of course, earlier pioneers. One of the first attempts to produce iron and steel according to modern methods was Mr Heath's at Porto Novo in the Madras Presidency, begun in 1830 and continued fitfully up to the sixties. There were also lesser attempts that failed. The first enterprise that became at all successful was the one started at Barakar in 1875 for the production of pig iron and taken over by the Bengal Iron Company in 1889. For a long time this company failed to make steel at a profit, chiefly on account of the poor quality of ore used, but after about twenty years' labour the concern was put on a paying basis by the discovery of a better-grade ore. Mr Watson, in 1907, estimated the output of this concern at about 50,000 tons of pig iron per annum.[4] The works were extended and remodelled during the next ten years and the Industrial Commission estimated their output under normal conditions at about 10,000 tons of pig iron per month.

[4] Watson, *Iron and Steel: Bengal*, Monograph.

Mr Tata had been first attracted to the project of producing iron and steel in India by reading the report of a German expert on some iron deposits in the Chanda district of the Central Provinces. He was at that time prevented from pursuing the project further by the discouraging attitude of officials and the vexatious rules governing the grant of prospecting licences. When, some years later, Mr Tata again thought of the exploitation of iron ore in India, he was able to interest Lord George Hamilton, the then Secretary of State for India, in the project and thus official antipathy was to a considerable extent removed. Mr Tata brought out a consulting metallurgical engineer from the United States and began an investigation of the then known deposits in the Central Provinces. The original site fixed upon—Lohara, in Chanda district—had to be given up on account of insufficient ore and lack of coal in the vicinity. Next, a more easterly district of the Central Provinces—Drug—was investigated. The ore here was plentiful but coal was far away. A midway site between the Bihar coal and the Drug ore was then contemplated. At this stage, on a communication from Mr P. N. Bose, a retired officer of the Indian Geological Survey, the survey party moved on into Mayurbhunj State and at last found the enormous deposits of iron ore, part of which the Tata Co. now exploits.[5] The Tata Iron and Steel Co. was floated in 1907, the capital subscribed being all Indian, the actual construction of the plant was begun in 1908, the first iron made in December 1911 and the first steel made in 1913. The works, as originally constructed, had a potential output of 160,000 tons of pig iron and 100,000 tons of steel per annum. Soon after the company began to market its production, the war broke out and very favourable conditions for the growth of the industry were created. Importation of steel was very difficult and the Indian companies tried to increase their output as much as possible. By 1916-17 the old plant was in full production. This production, according to figures given by the Tariff Board, was 147,497 tons of pig iron, 139,433 tons of steel ingots and 98,726 tons of finished steel, chiefly heavy rails and structurals, and bars and light struc-

[5] This stage was reached in 1906. Mr J. N. Tata had died in the meanwhile (1904).

turals. The heavy demand during wartime encouraged the company to plan large new extensions to their original plant. In the year 1916-17, a very large scheme of extensions was formulated. According to the original expectation, these extensions would have been completed by 1921, but initially the difficulties of the war period and afterwards the impossibility of getting early deliveries on account of the post-war boom delayed the project, and it was completed and began to work only in the year 1924.

Meanwhile, the circumstances under which the industry worked had changed completely. During the war the importation of iron and steel was very difficult, and prices therefore soared high. On the cessation of hostilities there was a sharp drop in prices in early 1919, but with the boom having definitely set in, they again picked up and record levels were reached in 1920. In 1921 the slump was as remarkable as the rise of the previous year and in the years following 1921 the drop in prices was further continued. While the price of steel was lowered, the cost of production increased considerably in the years 1921-3 on account of the higher prices of coal and a substantial increase in wages.

The Tata Iron and Steel Co. therefore found itself after 1921 in an extremely difficult position. The condition of the industry had attracted the attention of the Indian Fiscal Commission, which made in its report a special reference to it. And when, on the recommendations of that Commission, a Tariff Board was appointed, the application of the Tata Iron and Steel Co. was the first to be referred to it for consideration. The Tariff Board found that though eventually the industry in India would be able to exist without protection there must be an extremely difficult period of transition through which the industry could not be expected to pass safely without the help of protection. The original plant of the Tata Iron and Steel Co. was not economical in working and the Tariff Board thought that it was only after the extension planned in 1916-17 had been completed that the working costs would be reduced to an economical level. Further, the company had to employ large numbers of imported skilled workers and the replacement of these by Indians in course of time was also expected to reduce the wages bill. Besides,

the contracts for rails made with the various railways in and before 1919 had been made at comparatively low prices and involved the company in a considerable loss. The Tariff Board, therefore, came to the conclusion that, while it was not possible for the Tata Co. to manufacture steel at remunerative prices in 1923, there was considerable scope for and a future possibility of a reduction in working costs, which would make the industry independent of protection. The extent of protection recommended by the Board was arrived at by estimating the difference between the price at which steel was likely to be imported into India and the price at which the Indian manufacturer could sell it at a reasonable profit. This measure of protection was to last for three years, chiefly because of the uncertainty of future prices. The protection was to be given by imposing additional specific duties over and above the ordinary revenue duties on those kinds of imported steel which were manufactured by the Tata Co. and on wrought iron, as the commoner qualities of this could be used for many purposes for which steel could be used. Special bounties also were to be given on the manufacture of rails and fish-plates on a graduated scale for the three years. Arising out of these recommendations the Board also recommended an increase in the duties on fabricated steel for removing the handicap that would be imposed on the Indian engineering industry as a result of the adoption of protection for steel. These recommendations were accepted by the Government and the Steel Industry (Protection) Act was passed in 1924.

Almost immediately, however, the Tariff Board had again to report on the same question as their calculations of the price at which steel could be imported into India were upset by the continued depression in the world steel industry and the collapse of Continental exchanges. The price of steel went down very low and there were large importations. The Tata Co., therefore, asked for an increase in protective duties so as to maintain the old level of protection under new price conditions. The Tariff Board, reporting in October 1924, suggested a set of offsetting duties; instead of which, however, the Government substituted a measure of special bounties for one year subject to a minimum of Rs 50 lakhs. In

1925 there was a further investigation and additional assistance by way of bounties was agreed to by the Government for the next two years up to a maximum of Rs 60 lakhs. In 1927, the original period of three years expired and a second inquiry as to the continuance of protection to the steel industry was conducted by the Tariff Board.

The Bengal Iron Co., the first company to be commercially successful in the production of iron in India, also made good progress during the twenties. It steadily increased its production during the war and manufactured successfully during the later war years considerable amounts of ferro-manganese for export. The works contained a large foundry and the company had specialized largely in the production of foundry iron. The pig-iron industry did not suffer much in the post-war depression. It was one in which India proved to have distinct advantages, and the Tariff Board wrote in 1924 that India 'already produces pig iron more cheaply than any other country in the world'. Up to 1924 the production of pig iron was especially profitable. The industry, however, could not but be affected by the depression in the steel industry and by 1925 demand was slack and prices fell very low, and the Bengal Iron Co. had to close down part of their works at Kulti for some time. The prices, indeed, at this time touched so low a level that the Tariff Board calculated that it would be more profitable for Tatas under the scheme of protection to turn as much pig-iron as they could into steel rather than sell it raw. This depression in the pig-iron industry soon passed away and for some years afterwards Indian production increased rapidly. The productive capacity of the Bengal Iron Works was, in the twenties, 200,000 tons of pig iron per annum and most of it was used in the Company's foundry and other Indian foundries.

Another important iron works, the Indian Iron and Steel Co., was floated in the year immediately after the war. The works of the company were situated at Hirapur near Asansol and the first blast furnace began producing in November 1922. The original intention was to produce steel also, but having regard to the post-war condition of the steel industry, the Company decided for the time being to produce pig iron only. The capacity of the works was 350,000 tons of pig

iron per annum, all of which was produced for sale, the bulk being exported out of India.

The Tariff Board in 1927 found that during the period of protection improved methods had been introduced, and as a result of this, together with the new extensions and the lower price of coal, there had been a reduction of costs. The effect of the improvements had not been then fully realized. The older plant had become obsolete and the works as they stood were not properly interrelated. To remove these defects a further scheme of extension was proposed by the Company which was approved of by the Board. This would take the output of finished steel in a few years to about 600,000 tons per annum and would also effect a considerable decrease in works cost. The Board found that, though there had been some progress in replacing foreign skilled labour by Indians, the number of semi-skilled and unskilled labourers was still too large. They concluded that, though the position of the industry had improved, it still stood in need of protection, though on a smaller scale than before. The protection was recommended for a term of seven years and Tatas calculated that by 1933-4 the industry would be able to do entirely without protection. The extent of protection was calculated in the same way as in 1924. Bounties were to be abolished and a scale of lower duties was proposed. Though the measure of protection was recommended after taking Jamshedpur conditions into account. it was believed to be enough for any new manufacturer of steel in India. The Board further emphasized the point that no scheme of protection in India would be successful without the co-operation of the railways—the greatest purchasers of steel in India. The Board's scheme was in the main accepted by the Government and the Steel Protection Act was passed in 1927, though there was considerable opposition in the Legislative Assembly to the Board's recommendation differentiating in duties on British and non-British steel.

At the expiry of the seven-year period, in 1933-4, the Tariff Board conducted another inquiry into the position of the Indian iron and steel industry. The Board found that in spite of the great falling-off in the demand for steel products the industry had made very substantial progress, maintain-

ing its output and greatly reducing its costs of production. The share of the available Indian market obtained by the Tata Co. rose from 30 per cent in 1927-8 to 72 per cent in 1932-3. The Board estimated that costs would be further reduced by the proposed capital improvements and by anticipated increase of output. The Tariff Board noted that the realizations of the Company fell short of its anticipations because of the strike of 1928, the fall in prices, increased freight charges to more distant markets and failure of the anticipated demand from railways and the engineering firms. It found that protection had been responsible for creating a re-rolling industry which the Board recommended should be encouraged. The Board thought that the Ottawa agreement had been beneficial as regards pig iron and that continued free entry into the U.K. of this should be secured in return for a partly preferential duty on British galvanized sheets. It considered that it was necessary to continue protection up to 1941 to branches of industry which already enjoyed it and to extend it to other branches for a like period. The recommendations of the Tariff Board regarding protection to the iron and steel industry were generally given effect to by legislation passed in 1934. As they involved considerable reduction of import duties in certain important cases, with resultant shrinkage in customs revenue, the Government found it necessary to impose, as a revenue measure, an excise duty on steel ingots produced in India. Countervailing customs duties corresponding to this excise duty were imposed on important iron and steel articles.

After 1934 there was marked improvement in the market for the iron and steel industry and the production of the Tata Co. increased steadily year after year. The Indian industry shared in the boom conditions created for the iron and steel industry in most countries of the world largely as a result of the rearmament demand. The impact of these began to be felt in 1936-7 and continued, with some fluctuations, till the outbreak of war in 1939. Taking advantage of them the Tata Iron and Steel Co. extended their works and planned to produce many steel products, formerly imported. The Indian Iron and Steel Co. absorbed the Bengal Ironworks and floated the Steel Corporation of Bengal for the

production of steel in 1937. Actual production of steel by the Corporation commenced in November 1939. The Mysore Iron and Steel Works were established at Bhadravati in 1920 for the production of pig iron. A steel plant was added to the works in 1934 with a charcoal blast furnace. This feature necessarily limited the production capacity of the unit.

In the early years the production of the Tata Iron and Steel Co. was largely oriented to the demand from the railways. This dominance continued till the depression, during which the demand for rails and fish-plates sank very low. As a result the tendency towards diversification of production already exhibited in the late twenties was accelerated; it was further intensified after 1936. Whereas in 1929 rails and fish-plates accounted for about a third of the production of Tatas, the proportion was reduced to almost one-tenth ten years later.

Exports of pig iron from India reached a peak in 1929-30 but fell rapidly in the following years. The production of pig iron in the country was affected by the decline in exports and the falling off of internal demand on account of the depression. The demand both internal and external revived after 1933-4 and the exports of pig iron in 1939-40 were back at the level of 1929-30. Japan was the main customer for exports of Indian pig iron.

Domestic production of iron and steel was not affected by the depression, because the protected steel industry, though facing difficulties, was planning continuously to maintain a high level of production and to expand it. However, the total internal consumption of steel suffered a decline in the thirties. It reached a very low point in the years of depression and was in 1939-40 still considerably below the level reached in 1929-30.[6]

In the post-war boom year, when rosy expectations were formed of every industrial possibility, it was hoped to establish as many as seventeen subsidiary industries in the vici-

[6] The Iron and Steel (Major) Panel drew special attention to the fact that consumption of iron and steel in India in 1939 was not only much below that of 1929 but also lower than in 1914. Government of India, Planning and Development Dept.: *First Report of the Iron and Steel (Major) Panel, 1948*, chap. i.

nity of Jamshedpur. Most of these never went beyond the initial stages. One of the most important to be dropped early was the Burma Corporation project for the smelting of zinc ore, on which depended the chief possibility of manufacturing sulphuric acid in India. There were others, however, which were definitely established. These included companies for the manufacture of railway wagons and locomotives, agricultural implements, wire products, tin-plates, enamelled ironwares and cables. With many of these, such as the Steel Wire Products, Ltd, the Enamelled Ironwares Ltd, and the Indian Tin-Plate Co., the Tata Co. made special arrangements for the supply of steel. Most of these industries suffered during the period of depression and their varying claims to protection were considered by the Tariff Board.

In contrast to this was the history of the tin-plate industry in India. The Indian Tin-Plate Co. was started as a result of co-operation between the Tata Iron and Steel Co. and the Burma Oil Co. The works were started in December 1922. The industry was for long almost a preserve of South Wales, and it was feared that climatic conditions and inadequacy of skilled labour would militate against the establishment of the industry in India. On the other hand, a large home demand was a natural advantage that the industry enjoyed. The industry was recommended for protection in 1924 and as a result rapid progress was made during the next three years, output increased and works costs were reduced. Indeed, in 1927, the Tariff Board thought that the industry provided a notable illustration of the industrial progress attainable within a comparatively short period under a policy of discriminating protection. The progress of the industry further showed that Indian labour was easily trained as it was found possible to reduce the number of imported hands to half within six years. The Tariff Board in 1927 recommended continued protection for seven years on a reduced scale, rejecting the Welsh manufacturers' contention that the industry would never be able to stand on its own legs.

The Indian petroleum industry showed no signs of expansion during the inter-war period. Burma was still the most

important producer of mineral oil. The Burma fields increased their production during the war, but after 1921 there was a steady falling off in production from this source. However, distinct possibilities of expansion developed in the Assam and Attock fields.

The petroleum industry of the world grew tremendously both in size and importance after the first world war. However, during the inter-war years the Indian industry, with Burma as the predominant producer, showed little expansion. While production in Burma was stagnant through the period, the Punjab and Assam fields, especially the latter, recorded considerable proportionate increase. The production from both these sources remained, however, relatively small in 1939. The following table sets out (in thousand gallons) the figures of total production of petroleum in the various states in selected years.

	1920	1929	1935	1938
Burma	279,707	253,401	251,339	—
Punjab	51	19,209	3,437	21,113
Assam*	13,358	33,539	67,887	65,969

* Of the internal production over half was of kerosene and over a quarter of petrol.

The main mineral oil demand before 1914, largely satisfied through imports, was that for kerosene. This rose rapidly in the decade before 1914 but suffered a decline during the war years because of difficulties of importation. Imports of kerosene in the post-war years regained the pre-war level and increased steadily till 1929-30. They suffered a severe decline during the years of depression and the total internal consumption of kerosene did not reach in 1938-9 the total of 1929-30. In the post-war period the Indian demand for other products of the petroleum industry, particularly petrol and fuel oil, became important and rose rapidly during the twenties. The demand for petrol was supplied mainly by internal production and imports were small. The internal production of fuel oil was, however, negligible and the demand was met

largely through imports. These rose from about 28 million gallons in 1918-19 to over 100 million gallons by 1927-8, remained stagnant till 1934-5 and attained a level of over 130 million gallons in subsequent years till 1939-40.

Burma was separated from India on 1 April 1937. This seriously affected production and trade figures, especially in relation to the products of the petroleum industry. However, though after 1937 Burmese production and trade were not treated as internal the change in administrative arrangements did not affect the levels of production and exchange. In the following table the figures for 1938-9 reflect the change made by the separation of Burma.

Imports (thousand gallons)	Pre-war average	Post-war average	1929–30	1934–5	1938–9
Kerosene	66,909	63,418	106,457	68,646	182,054
Other mineral oil	24,056	75,515	146,311	132,686	256,657
Of which: Petrol			4,655	1,483	85,821
Fuel Oil			110,203	111,263	136,788

The manganese industry suffered a setback during the opening years of war; it recovered in 1916 when a strong demand in munition manufacture made itself felt in all the allied countries. Exports were kept down during the war period due to difficulties of shipping. They were somewhat higher than the pre-war level during the immediate post-war period and attained much higher levels in the late twenties. The international demand for manganese ore is closely related to the fortunes of the steel industry in the world. The severe depression in the industry in the early thirties, therefore, reduced demand and exports drastically. Boom conditions in the latter part of the decade led to a rapid recovery and exports reached a record height in 1937-8. The level was, however, not kept up in subsequent years. Domestic production was almost entirely for exports and varied with external demand. The bulk of the production was from the mines in the Central Provinces. Japan became

an important importer of Indian manganese ore in the thirties. For a considerable part of the inter-war period, India's chief competitor in this export, Russia, was out of the running. The domestic iron and steel had not by 1939 gone into the manufacture of the higher grades of steel which required supplies of manganese. During 1917-18, it was found profitable to manufacture ferro-manganese for exports and these exports in 1918 amounted to 11,000 tons; they remained low, between 2 and 5 thousand tons, during the twenties and ceased entirely after 1930-1. Quantitatively production of manganese ore in India remained round about 8-10 lakh tons level in the twenties, it fell to a low of a little over 2 lakh tons in 1932 and 1933 and regained the earlier level in 1936 and after. The exports correspondingly were between 6 and 8 lakhs in the twenties, less than 2 in 1932-3 and topped the 10-lakh mark in 1937-8.

Mica also continued to be mined almost entirely for export during the inter-war period. Mica is produced mainly in districts of Bihar and blocks of it exported directly. The industry suffered owing to loss of export demand at the outbreak of the war; however, on account of its use for munition purposes the Government began purchases of mica of all qualities and the industry experienced a period of prosperity for the duration of the war. It was affected by the post-war slump but made steady progress thereafter. The depression of the early thirties affected production and exports relatively slightly and both soon recovered to reach quantities almost double the level of the twenties from 1936 to 1939. The pre-war and post-war averages of exports of mica were 49 and 60 thousand cwt respectively, the highest figure in the twenties was reached in 1929-30 at 115 thousand cwt, while in 1939-40 the exports reached the record figure of 217 thousand cwt.

The tea industry, almost since its inception, had experienced steady growth and almost uninterrupted good fortune and was doing unusually well when the war broke out. Immediately after the beginning of the war, prices rose high and a fillip was given to intensive tea production. Both in production and exports records were rapidly broken. The difficulties of tonnage were, however, felt in the later years

of the war and the prices could not be kept up at the high level attained during 1916-17. However, during the later war years, large purchases on behalf of the United Kingdom Ministry of Food relieved the Indian industry considerably. The years 1914-19 were for the plantations distinctly good years. The prices from 1914 to 1917 were well above the pre-war level; the wages of labourers on the other hand were stationary. The result was an era of high profits, and new gardens and extensions were planned and old gardens rapidly increased their production. The break came in 1919 and for the next two years there was severe depression. The year 1920-1 was a most disastrous year for the tea companies. Unlike the other industries, however, recovery was remarkably rapid, and from 1921-2 began another period of rising prices and increased production.

An important factor in the maintenance of relatively steady progress in the tea industry was the readiness of producers to combine to limit exports and production. This proved specially important in the great depression of the early thirties. At this time, the initial attempts at achieving international agreement did not succeed and the industry experienced adverse conditions in 1931 and 1932. These led to fresh efforts and, beginning with 1933, the three main producers—India, Ceylon and the Netherlands East Indies (Indonesia)—agreed to restrict export for a period of five years and also to limit extensions of cultivation. During the five-year period each country was to be given a quota related to a base year in the light of total world conditions of production and trade. The scheme for the international control of exports was extended for a further period of five years in 1938. This international scheme was administered by an International Tea Committee and the Government of India passed the Indian Tea Control Act in 1938 to give effect in India to the provisions of the International Tea Agreement. An Indian Tea Licensing Committee was constituted under the Act to control exports of tea and extensions of cultivation. Because of the working of the agreement exports of tea from India were on an average at a somewhat lower level during the thirties than those during the closing years of the twenties. Production and acreage also increased only in

a moderate measure in the thirties. Exports, production and acreage all had experienced rapid growth for the ten years before 1930. Average exports were around 320 million lb. in the war and the post-war period and reached figures above 360 millions in the closing years of the twenties. During the twenties acreage rose from about 700 thousand acres to 800 thousand acres and production from about 350 million lb. to above 400 million lb. About half of the increase in acreage in the period subsequent to 1915 took place in the south. This increased the relative importance of the south in the industry, though Assam still continued to be dominant and to account for more than half of the total acreage and production. After the war India lost the Russian market for tea, which had been building up before the war, and the dominant importer of Indian tea throughout the inter-war years was the U.K.

The plantation of rubber in India on a commercial scale may be said to have commenced in 1902. By 1910 the area under rubber had increased to 29,500 acres and to about 46,000 by 1914. There was a rapid expansion of the use of rubber and of the market for rubber during and after the war and production increased by leaps and bounds all over the world. Acreage under rubber in India reached 118·5 thousand acres in 1919.

There was rapid increase in new plantings in the period up to 1932 and a special feature of this was the relatively large share taken by small holdings, i.e. plantations below 100 acres, as compared with estates having acreage above 100. The slump of prices in 1930 and subsequent years led to discouragement of new plantings especially by small holders. In 1934 an International Rubber Regulation Agreement came into being whereby production and new planting of rubber were restricted and regulated. As a result of the operation of this agreement, prices of rubber began to increase. New plantings in India increased in subsequent years to the extent permitted by the International Agreement.

Burma was included in the Indian rubber statistics up to 1936. In the decade ending in 1936 rubber acreage in Madras and Cochin had been stagnant and it had increased

chiefly in Burma and Travancore. The following table brings out the variations in rubber acreage between 1926 and 1936 in various regions.

Acreage under Rubber

	Burma	Travancore	Madras	Cochin	All-India
1926	69,184	43,592	14,204	8,986	139,491
1933	105,086	95,832	11,604	9,530	224,178
1936	106,218	96,772	12,439	9,530	228,841

The acreage under rubber in India (excluding Burma) increased from 119 thousand acres in 1933 to 138 thousand acres in 1940.

The rubber manufacturing industry was started in 1920 in India with the establishment of a general rubber goods factory in Calcutta. The real beginning of the industry may, however, be said to have taken place when the International Rubber Regulation Agreement (1934) came into operation. As a result of the quota system of exports adopted in the Agreement 'a large portion of Indian raw rubber was left over in the country. This became available to the manufacturing industry in India at a price below the world price. During the same period the large overseas manufacturers of rubber goods began to decentralize their production and some of them established subsidiary factories in India.'[7]

While almost the entire production of raw rubber in India was exported before 1930, by 1939 about one-third of it was retained for manufacture within the country. As a result, imports of rubber manufactures which consisted chiefly of motor and cycle tyres and tubes, began to decline in quantity after 1934-5.

The Industrial Commission pointed to the non-manufacture of heavy chemicals in India as one of India's most serious industrial deficiencies. The conditions of wartime with the

[7] *Report of the Tariff Board on the Rubber Plantation Industry (1951)*, par. 6.

keen demand for various chemicals for munitions purposes had emphasized the national importance of this industry; and it was expected that, on account of opportunities and special encouragement given during the war, chemical industries would be securely established in India. These hopes were, however, not fulfilled. The Indian demand for chemicals was small, because of the absence of industries using heavy chemicals in large quantities, such as glass and soap, or dyes and drugs.

After the war the demand for chemicals in India increased and there was a considerable growth of that side of this industry which was based on sulphuric acid. However, the sulphuric acid was manufactured from imported sulphur and its cost was high. The units of production were small and works were constructed near the seats of big industries to serve the local demand. The Tariff Board which reported on the application for grant of protection by the industry found that while on account of heavy freights the manufacture of acids had been generally carried on profitably in India the absence of this natural protection prevented the manufacture of salts derived from sulphuric acid except on a small scale. The Tariff Board did not think the absence of indigenous supplies of sulphur a great handicap and were of the opinion that the industry merited protection because of its supreme national importance. The Tariff Board in making its concrete proposals was in this case confronted with a peculiar difficulty. It could not base these proposals on the actual working costs of any particular factory, as all the factories were working, at the time of the investigation, on too small a scale. Bombay was the biggest market for these chemicals in India and the Tariff Board based its proposals on the minimum size of a single concern catering for the whole of the Bombay demand. The Board was further of the opinion that a reorganization of manufacture on the basis of a single unit catering for the whole Indian demand would be most proper. There were, however, no measures suggested for actively bringing either this or even a partial amalgamation about. Government, even though it admitted in its resolution (September 1931) that the imposition of duties would tend rather to perpetuate the present organiza-

tion than modify it, considered the duties proposed by the Tariff Board as generally suitable, and imposed them on the imports of these manufactures in the large majority of the classes.

No reorganization of units in the industry on lines visualized by the Tariff Board took place after the imposition of duties by Government. The Tariff Board had estimated the total market in India in terms of sulphuric acid at about 12,000 tons. The actual production was much lower and the Board had noted that two units near Calcutta and Bombay, either of which was capable of supplying practically the whole market, were by a mutual arrangement producing only a fraction of their possible output at considerably enhanced cost. Industrial development in the thirties considerably increased the size of the Indian market. However, the other conditions noted by the Board persisted. The number of units in the industry in 1940 was 23; these were scattered and had a total production capacity of 57,000 tons. However, even though the internal demand had risen in the late thirties production was not higher than 28,000 tons in any year before 1940.

During the thirties Indian industries in which chemicals other than sulphuric acid constituted important raw materials in manufacture also grew. This was reflected in the large increase in imports of a variety of chemicals in the decade before 1939. However, no important developments took place during the time in indigenous manufacture of these chemicals. The Tariff Board in its report (1929) had also recommended a bounty to encourage establishment of the manufacture of superphosphate based on rock phosphate within the country. Government did not accept this recommendation and no manufacturing unit of this type was established in India before the war.

The acreage under sugarcane in India, which had suffered some decline in the nineties, was stabilized during the first decade of the twentieth century. It exhibited a small growth in the post-war period owing chiefly to a sharp increase in the price of gur. However, the large fall in the price of imported sugar at the end of the twenties led to a fall in sugarcane acreage to older levels. Gur was the main

product of sugarcane in India. Its production during this period varied between $2\frac{1}{2}$ and 3 million tons largely in accordance with fluctuations in the acreage planted. The total output of white sugar by all types of processes was estimated in the twenties at about 300 thousand tons. Three-quarters of the acreage under sugarcane in India in the post-war period was in the United Provinces (50 per cent), the Punjab (15 per cent), and Bihar & Orissa (10 per cent). There was a fall in the imports of sugar into India during the war years, but the pre-war level had been regained by 1925. There was a further increase in the level of imports in subsequent years, attributed to an increase in consumer demand. Prices of imported sugar, which had reached a very high level in the immediate post-war years, fell sharply in 1921-2 and continuously thereafter. Concurrently, the revenue duty on imported sugar was raised a number of times. There was during the period a steady increase in the world production of sugar, and because of the restrictions on imports of sugar in many countries the price of sugar on the free world market fell sharply after 1928-9. In 1930 the Imperial Council of Agricultural Research requested the Government of India to refer the question of protection for the Indian sugar industry to the Tariff Board and in doing so the Council noted that the provincial governments of the United Provinces, the Punjab and Bihar & Orissa had specially asked for this.

In an examination of this question the Tariff Board was confronted with a novel set of circumstances. The grant of protection to the sugar industry involved the consideration of a wide variety of producers. There was the cultivator in whose economy, especially in certain parts of India, sugarcane played a very important part. Then there was the producer of gur (who, however, the Tariff Board found, was not directly affected by the price of sugar) and the different producers of sugar, the country *khandsari* producing a brown type of sugar, the producers of white sugar by the indigenous *bel* process, and the refineries of gur and modern factories producing white sugar directly from cane. This was the first time that the question of protecting agricultural interests had come before the Tariff Board, and the Board

decided that in view of the importance of sugarcane in the agricultural economy of India the interests of sugarcane cultivators ought to be protected by the State. The Board concluded that 'it is essential in the national interests that the area under sugarcane should not diminish and that a fresh outlet should be provided for cane by encouraging the expansion of the white sugar industry. Unless steps are taken to develop the white sugar industry a disastrous slump in the gur market is probable which will seriously affect the agricultural classes, disorganize the agricultural system and involve the abandonment of better cane cultivation in large areas.'

Though the Tariff Board found that imports of white sugar had not yet affected sugar prices they feared that recent imports of Java Gur and the manufacture of imitation gur from imported sugar might threaten the position of the sugar industry. They, therefore, recommended a duty on sugar imports. In the case of white sugar they recommended a scale of duty which would cover the needs of both the modern factories and the manufacturers of sugar by indigenous methods. This scheme of protection was recommended for a term of 15 years and the Board thought that at the end of that period even though Indian prices might not compare favourably with those of Cuba or Java they would at least be on a par with those of other sugar producers of the world. The proposals were substantially accepted by Government in September 1931.

The policy of discriminating protection in the case of the sugar industry proved successful beyond expectation in increasing the internal production of sugar and reducing imports of foreign sugar. The acreage under sugarcane increased sharply after 1930, reaching a very high level in 1935-6, after which year it showed some decline. There was considerable improvement also in the quality of the sugarcane. The production of sugar in the country increased from 350 thousand tons in 1930-1 to 1,250 thousand tons in 1936-7. This was, for the most part, contributed by modern factories manufacturing sugar directly from cane. The number of these increased from 29 in 1930-1 to 140 in 1936-7 and their share of the total production of sugar in the country increased from 45 to

86 per cent. During the same period imports of sugar into India fell from 809 thousand tons to 22 thousand tons. Production of gur also doubled between 1930-1 and 1936-7. Because of the obviously large margin afforded by the revenue and protective duties imposed in 1931 and 1932, Government imposed in 1934 an excise duty on sugar manufactured in India; this was increased in 1937. The price of sugar did not record an increase following the grant of protection or the imposition of excise. It showed a declining trend continuously between 1931 and 1937. This led the Tariff Board of 1937 to hold that 'the consumer had every reason to be satisfied with the policy of protection. He is paying less for his sugar than he paid before the advent of protection.'[8] Also *per capita* consumption of sugar in the country, which had dropped below the level reached in 1930 for a few years after the imposition of revenue and protective duties, regained that level by 1936. In the thirties the establishment of new sugar factories and expansion of sugar production was concentrated in the United Provinces and Bihar. However, establishment of new factories and production received a marked impetus also in Bombay and Madras.

On the eve of the war there was only one cement works in India, but three cement companies had been floated which commenced production after the war broke out. These were the Porbander, Katni and Bundi factories. Their establishment was very opportune, so Government found, and during the later war years they worked under official control which lasted till the middle of 1919. The war years gave a good start to the industry and the building activity of the boom period further helped it. In common with other countries of the world, Indian consumption of Portland cement had been making rapid strides. India has plentiful supplies of excellent limestone well distributed all over the country and the prosperity of the war and post-war years led to a phenomenal growth of the industry. Between the years 1922 and 1925 seven new companies started production in various parts of the country and there followed a period of over-production and severe price-war. The years 1923-5 were especially bad

[8] *Report of the Indian Tariff Board on the Sugar Industry (1937)*, p. 167.

and the industry applied to Government for protection. The Tariff Board found that in the internal markets the internecine competition was responsible for the troubles of the industry, and that the industry was at a special disadvantage in the ports of Calcutta and Bombay, which were at the time the chief consumers of Portland cement in India. In the ports, imported cement was distinctly cheaper than Indian cement and the protection recommended by the Board took the form of bounties on Indian cement sold in the two ports. This was not accepted by Government.

However, Government raised the revenue duty on imported cement in 1926 and this reduced the price advantage of imports in port markets. The industry also accepted the recommendation of the Tariff Board regarding the necessity of co-operation among manufacturers. In 1926 the Indian Cement Marketing Association was formed. This reduced competition within the industry by fixing a common sale price. In 1927 the Concrete Association of India was established to investigate and popularize new uses for cement. Much greater progress in mutual co-operation was marked by the formation of the Cement Marketing Company of India to take over the control of sales and distribution of the various companies. All existing factories became members of or came to an agreement with this company.

The formation of the marketing company did not involve co-ordination of production, which continued to be at the factories' discretion. In 1936, however, the four main groups of producers, who together owned 10 of the then existing 11 factories, agreed to amalgamate and form a unit called the Associated Cement Companies Ltd. Increasing mutual co-operation after 1925 eliminated the adverse effects on industry of severe internal competition and there was steady increase in production, except for the years of depression. Increase in manufacturing capacity also took place. However, this was brought about chiefly by expansion of capacity of existing units.

The lifting of the depression and the elimination of internal competition created conditions which led to the establishment of factories outside the newly formed cement association. The Dalmia group came into existence in 1937 with

five factories. The A.C.C. added some units and there were other ventures. In 1939 there were twenty-one factories of which the A.C.C. owned 12, the Dalmia group 5, and others 4. The installed capacity had reached 1·5 million tons of cement in 1937 and the actual production was 1·1 million tons. The corresponding figures for 1940 were 2·5 million tons and 1·5 million tons. Because of the increase in domestic manufacture imports were practically eliminated by 1939-40. The pre-war average of imports was about 130 thousand tons and the post-war average about 120 thousand tons; imports were still about 75 thousand tons at the end of the twenties but declined rapidly in the succeeding decade, reaching a figure of 11 thousand tons in 1939-40.

The match industry of India affords the curious example of a revenue duty bringing about the rise of a protected industry. This was the outcome of the very high specific duty of Rs 1-8-0 per gross levied on imported matches by Government for revenue purposes in 1922. Previous to this year there was almost no successful manufacture of matches in India but as a result of the high duty a large and successful industry came into existence within the course of a few years. As in match manufacture almost all the processes can be done either by hand or by machinery, there is a great variety in the nature of the producers in the industry, ranging from completely machine-equipped factories producing on a very large scale to mere cottage manufacture without the use of any machinery. The growth of an internal industry naturally led to a steady diminution of imports and of the revenue from the duty. Government asked the Tariff Board in 1926 to review the situation thus created and the Board recommended the conversion of the revenue duty into a protective duty of the same amount. The pre-war average imports were 14·6 million gross; and the post-war average imports were 12·7 million gross. By 1931-2 these imports had declined to 0·1 million gross.

Large-scale units in the match industry were first established in 1926 by the Swedes through the Western India Match Co. This company and its associate the Assam Match Co. worked by 1940 five factories. The production of these was responsible for more than four-fifths of the total production

of matches in the country. The cottage type of production in the industry was concentrated in districts in the extreme south. Protection of the match industry in India had the result chiefly of establishment of production units in the country by foreign interests already dominating the world industry.

The manufacture of paper according to modern methods was started in India in 1870 through the establishment of the Bally mills on the Hooghly. A number of other paper mills were established in the country within the next two decades. However, production capacity became concentrated in the Titaghur group near Calcutta. There was no significant increase either in the number of mills or in production capacity during the first quarter of the twentieth century, though actual production of paper by the mills increased significantly during the years of the war and the immediate post-war period. The Tariff Board inquired during 1924-5 into the claim for protection of the industry and recommended that protection be given to certain classes of paper. This was done. As a result, production was stimulated and expansion of capacity was undertaken by some existing units. Production became stagnant during the years of depression but resumed an upward course after 1932-3. As might be expected, increase in production took place chiefly in the protected varieties; by the end of the thirties these accounted for almost four-fifths of the total production in the country.[9] Imports of these varieties also declined sharply. On recovery after depression favourable conditions encouraged the establishment of a number of new units in many parts of the country.

An important change that came about after 1925 was that much greater use was made of bamboo as raw material instead of imported pulp, on which chief reliance had been placed formerly. This also affected the location of the new units which tended to be placed near the source of raw material. Whereas the older units in the industry were mostly British-owned the new factories established in the thirties were mostly Indian-owned.

For most of the first quarter of the twentieth century the

[9] N. S. R. Sarty, *Statistical Study of India's Industrial Development*, p. 114 (1947).

number of paper units in India was 9. The average annual production on the eve of the first world war was about 27 thousand tons. For the years 1915 to 1920 average annual production increased to about 31 thousand tons, but returned to the pre-war level in 1924-5. In 1930 the number of units increased to 11 and the production to about 40 thousand tons. Upward progress was resumed after 1933 and in 1939 the number of mills was 16 and production 73 thousand tons. Growth of indigenous production was accompanied by increase in imports also. Evidently the increase in domestic demand was specially rapid after 1925. Whereas the average of imports of paper and pasteboard for the post-war years was 1,295 thousand cwt the imports in 1938-9 stood at 3,073 thousand cwt.

The leather and tanning industry received some stimulus as a result of the war. Tanning, other than by the traditional village tanner, was represented chiefly by a number of small-scale tanneries located in South India which produced vegetable-tanned leather, known as East India kips, largely exported to the U.K., a group of small-scale chrome tanneries mainly located round Calcutta and worked by the Chinese community, and about 25 large-scale tanneries located chiefly in the Bombay and Madras Presidencies producing bark-tanned leather chiefly from cowhides. Little machinery was used in this industry. Leather works of the modern type had been established at Cawnpore before the war. Because of the encouragement given by the war some others were also established but they were only moderately successful. The main product was footwear chiefly of the Western type. A large part of the demand for the Cawnpore industry came from the army. An important development of this period was the establishment in the early thirties of the Bata Shoe Co. in Calcutta.

CHAPTER XVII

Labour, 1914-39

On the report of the Factory Commission of 1908, Government, accepting in the main the views of Dr Nair, introduced a bill in 1909 which was finally passed in 1911. The old differentiation between textile and non-textile factories was kept up in this Act. The Act provided for the limitation of the working hours of children and women to seven and eleven respectively and a compulsory recess for half an hour in the middle of the day in all factories. The old limits (9 to 14) for the age of children were retained, though provisions were made for getting the age properly certified. In the case of textile factories, in particular, the working hours of children were limited to six and of adult males to twelve and they were prohibited from using mechanical and electrical power for more than twelve hours a day. New provisions were also introduced regarding the health and safety of the workers. The provisions of the 1892 Act, as pointed out above, had been a dead letter to a very large extent, on account of inadequate inspection machinery. This was remedied under the new conditions and inspection was made much better. The only notable new abuse that sprang up under the 1912 Act was the practice of employing children in two different factories, thus converting half-timers into full-timers.

The inquiry into the conditions of factory labour had been started in 1905 on account of the existence of some glaring abuses in Bombay mills made possible by the introduction of electric light. It is also true that most labour legislation, including that of 1912, was to a large extent initiated because of pressure from Lancashire and Dundee. In no case could it be said that the agitation for a bettering of conditions had proceeded from the workers themselves. To a certain extent this state of affairs was changed by the war. For the first time there arose in India what may be called a labour movement. The general awakening which was one of the universal re-

sults of the war, combined with high prices and stationary wages which meant greatly worsened living conditions, was responsible for this. The credit of being the first trade union proper in India is usually given to the Madras Labour Union formed by Mr B. P. Wadia in 1918. Similar bodies sprang up rapidly in most other industrial centres. Strikes followed, aimed chiefly at getting higher wages. Naturally these new growths were not all of them well organized, but the labourers learnt during the post-war period the value of organization, and the efficacy of the strike weapon. The years 1919 to 1921 were the most successful years for the new labour movement in India. The industries had been generally doing well and the manufacturers were anxious not to lose many working days during the boom period. The wage level had also lagged considerably behind the general price level and there was therefore a large margin left for increments. This period was therefore one of generally short and on the whole successful strikes.

The success of the strikes helped the growth of the movement and it spread rapidly all over India. The year 1920 was specially characterized by a series of successful short strikes. There were a series of strikes in the jute mills in Calcutta, in Jamshedpur, in the coalfields and in the cotton mills of Bombay and Ahmedabad. There were also strikes of employees in railways, docks, the postal department, etc. Most of these were followed by increases in wages and the Bombay and Ahmedabad cotton operatives also obtained from their employers a ten-hour day. The boom ended for most industries in 1920 and already in the first quarter of 1921 a steady decline in the number of strikes and a strong tendency to an increase in their duration and in the proportion of unsuccessful strikes was observable. These tendencies appeared everywhere except in the cotton industry, which was still prosperous and in which a large number of successful strikes took place in connexion with the bonus question in the last quarter of 1921. From 1922 the era of successful strikes came definitely to an end even in the cotton industry, and the labour movement began to experience a period of acute difficulties. The only serious strike in 1922 was that on the East Indian Railway. With the Ahmedabad mill strike of 1923 began the

reverse process of fights against the inevitable reduction in wages. For some years the strike weapon was less and less used till with the full effects of depression beginning to be felt there was a recrudescence of strikes in 1928. In this the bitter dispute at Jamshedpur and the long and protracted struggles of the cotton operatives in Bombay in 1928 and 1929 were most prominent.

By this time trade union organization in India had begun to become more cohesive and purposive. Most of the early unions were hardly better than strike committees. Beginning with a series of successful strikes during the upward curve of a trade cycle trade unions appeared to grow rapidly in numbers and strength. With the advent of an adverse period a great many of the mushroom growths perished and the trade union movement for a time was at a very low level of membership and funds. Although the All-India Trade Union Congress was formed in 1920, its main strength in early years was derived from unions of railwaymen, seamen, post and telegraph workers and government and municipal servants. Among industrial workers the main units were in the cotton textile industry in Madras, Ahmedabad and Bombay and in the iron and steel industry at Jamshedpur. Trade union organization was relatively weak even among the textile workers of Bombay till 1928.

During the early years, trade unions faced difficulties arising out of the absence of a trade union law in India. This became evident when the Madras High Court, in a suit against leaders of the Madras Textile Labour Union in 1921, held trade unionism to be illegal conspiracy. The Government of India in the same year accepted the principle of a resolution moved by Mr N. M. Joshi in the Legislative Assembly for legislative registration and protection of trade unions. Owing to the opposition of employers, legislation was, however, delayed and the Indian Trade Union Act was passed only in 1926. Data regarding trade unions registered under the Act are available for 1927 and after.

The 1928-9 strikes were remarkable for the number of workers involved in them, for the long periods over which they dragged and for the number of places at which they occurred. Some were in the nature of general strikes and

went beyond the usual grievances relating to wages and retrenchment to problems like rationalization. Government found it increasingly necessary to intervene in these strikes. Another feature which became prominent in these years was the entry of communists in trade union leadership. This led immediately to more extreme attitudes and actions in the launching and conduct of strikes in 1929 and to the split in the All-India Trade Union Congress at the end of that year. However, the strikes originated basically in the conditions of work and living of labourers. As the Royal Commission on Labour recorded, 'Although workers may have been influenced by persons with nationalist, communist or commercial ends to serve we believe that there has rarely been a strike of any importance which has not been due entirely or largely to economic reasons.'[1]

Weakening of the trade union movement coincided with the onset of the depression. Retrenchment and wage cuts were freely resorted to by employers during the years of depression and workers were unable to resist them. Government also displayed a harsh and unsympathetic attitude towards any manifestations of labour discontent such as strikes. Such improvement in the situation as came about during these years was largely the result of Government action on the recommendations of the Royal Commission on Labour. The end of this period of adverse conditions for labour came with the ushering in of provincial autonomy. The constitutional changes provided for some gains for labour also. Representation in the provincial legislatures and at the centre was provided for labour through labour constituencies or registered trade union constituencies. Consistent efforts made after 1933 also resulted ultimately in repairing the split in the All India Trade Union Congress by 1938. The advent of the new ministries meant a marked change in the attitude of Government towards labour. It induced some change in the attitude of employers also. Employers had hitherto been unwilling as a rule even to recognize unions and counted on Government acting on their behalf. This was changed to a large extent, as was evidenced by a Congress Minister

[1] Report of the Royal Commission on Labour in India, p. 335 (1931).

(V. V. Giri) promulgating an order under Sec. 144 of the Criminal Procedure Act not, as usual, against workers but against an employer.[2]

Beginning with 1937 trade union activity increased greatly and there was a recrudescence of strikes. Improvement in the fortunes of industry also contributed towards this change. In a number of instances labour regained some of the lost ground. Many ministries appointed committees to inquire into problems of labour generally or into their specific aspects. The only important piece of labour legislation enacted by the short-lived Congress Ministries was the Bombay Industrial Disputes Act (1938). Earlier legislation in India dealing with the settlement of trade disputes had been very sketchy. The Trade Disputes Act (1929) which applied to the whole of British India provided for the establishment, on an *ad hoc* basis, of courts of inquiry and boards of conciliation with a view to investigating and settling trade disputes. The Bombay Trade Disputes Conciliation Act (1934) empowered Government to appoint suitable persons as conciliators and authorized conciliators to initiate conciliation proceedings in cases where a dispute existed or was apprehended. It further provided for the appointment of Government labour officers to look after the interests of labour in industry. The Bombay Industrial Disputes Act (1938) broke entirely new ground and established an approach which was later to prove extremely influential in India. The Act required every employer to frame and submit standing orders in relation to the discipline and working in his establishment. Any employer wishing to make a change in these orders had to notify employees and Government. Employees wishing to bring about a change were similarly required to notify. The Act made it obligatory on parties to a dispute, arising out of disagreement about a proposed change or in other ways, to endeavour to obtain a settlement by conciliation before resorting to a strike or lock-out. Machinery was provided for the settlement of disputes by arbitration when both parties agreed to such arbitration. The Act also conferred rights in connexion with

[2] V. B. Karnik, *Strikes in India*, p. 281 (1967).

representation on behalf of workers on unions which fulfilled certain requirements as regards membership or which were recognized by employers.

The approach established by the Bombay Industrial Disputes Act (1938) was based to a large extent on experience of labour relations in Ahmedabad. The Textile Labour Association of Ahmedabad established in 1920 had in a few years' time become a highly efficient organization looking continuously after the interests, small and large, of its members and conducting a number of welfare activities. Its working was based on the principle of settling all disputes and grievances by discussion in the first instance or by conciliation proceedings or finally by resort to arbitration. Ideally this would eliminate all strikes and lock-outs. Though such complete elimination was not achieved, in the special conditions of Ahmedabad and with the guidance and influence of Mahatma Gandhi, this approach had a large measure of success in Ahmedabad. Until 1938 the Ahmedabad Union had kept aloof from the mainstream of the Indian labour movement. With the formation of the Congress ministries, however, its ideas became influential as being sponsored by the most experienced labour leaders within the Congress.

The following table sets out figures relating to the number of registered unions and their membership for selected years.

Year	No. of registered trade unions	No. of unions from which returns were received	Total membership of unions making returns
1927–8	29	28	100,619
1929–30	104	90	242,355
1934–5	213	183	184,918
1937–8	420	343	390,112
1939–40	667	450	511,138

Among the 450 trade unions with membership of 511 thousand in 1939-40 making returns the important groups were:

Economic activity	No. of Unions	No. of members (thousands)
Railways	86	179
Textiles	85	137
Seamen	8	53
Docks, Posts & Telegraphs	23	23
Municipal	37	20

The ferment in the world of labour since 1919 had attracted the attention of many to the working conditions of labour in India, but the main incentive to a further amendment of the Factories Act came this time also from outside. India was an original member of the League of Nations and the draft conventions and the draft recommendations adopted by the Labour Conference at Washington necessitated a revision of labour legislation which the Government of India could not very well avoid. The Legislative Assembly in 1921 passed a resolution to ratify the conventions and the next year the new Factories Act was passed. By the new Act the definition of a factory was widened; any establishment not employing less than 20 persons and using mechanical power came under its scope. The old distinction, which had been maintained in all previous legislation, between textile and non-textile factories, was abolished. The minimum age for the employment of children was raised from 9 to 12 and the maximum from 14 to 15 and no child could be employed without the production of a medical certificate. The working hours of adults were restricted to 60 hours a week and the mid-time recess increased from half an hour to one hour. Regulation was also made as to payment for overtime work. These were the chief provisions. The Act was amended slightly in 1923 and again in 1926. The amendments in 1926 were adopted to ensure a smoother working of the Act and were the result of the recommendations of a conference of the Chief Inspectors of Factories of the various provinces. The most important of these amendments was one which made it an offence for a parent or guardian to allow a child to work in two factories, a provision intended to check an abuse, noted above, which had become common in some industrial centres, especially

Ahmedabad, since 1912. The scope of the new Act was much wider than that of the old one and the inspecting machinery under it was also much more elaborate.

The Royal Commission on Labour in India, which, among other things, exhaustively reviewed labour legislation in India, made a series of recommendations regarding further amendments to the Act. The most important of these recommendations were for the weekly limit of hours in perennial factories to be reduced to 54 and the daily limit to 10, and for the introduction of legislation to ensure that the total working hours of any individual were not spread over too long a period during the day, thus depriving him or her of proper continuous rest. This was recommended as the Commission found notable abuses in this regard in the case of the working of the shift system, especially in jute mills. There were recommendations also for providing that persons between the ages of 15 and 16 should not be employed as adults without a medical certificate, for more strictly regulating overtime and basing the grant of exemptions on proper uniform standards throughout India. In case of seasonal factories the new hours were not recommended but a more vigorous administration of the law and much more sparing and uniform grant of exemptions was urged. A special recommendation was made to control artificial humidification where it caused serious discomfort, and for prescribing legal minimum provisions for water-supply, shelter, latrine accommodation, first-aid appliances, etc., for the workers. The Commission also recommended that some of the factories at present unregulated should be brought under legislation. In the case of small factories using power it was recommended that the local Government should be given power to apply certain sections of the Factory Act to these where conditions of work were dangerous. In the case of factories not using power which were unregulated the Commission thought that a separate, brief and simple Act was necessary. The Commission was specially impressed with the conditions of child labour in the bidi and carpet factories, and with the working conditions (dangerous to the health of the worker and extremely insanitary) that obtained in wool-cleaning establishments, in shellac factories, and tanneries. They therefore recommended

legislation providing for an age-limit for children, regulation of the hours of work of children employed and some safeguards for the health and safety of other workers in these industries.

The Factories Act of 1934 incorporated most of the recommendations of the Royal Commission on Labour. It limited working hours for adults to 54 in a week and 11 a day in seasonal factories. It provided for a weekly holiday and a higher rate of pay for overtime. It restricted the hours of work for children to 5 a day and for women to 10 a day and forbade night work for both. The Act applied only to factories using mechanical power and employing 20 workers or more. Government did not implement the Royal Commission's recommendation for enacting separate legislation relating to unregulated factories which do not use any power, irrespective of the number of workers employed. However, it empowered provincial Governments to extend the provisions of the Act to undertakings employing not less than 10 persons and working with or without mechanical power. The Governments of Bombay and the United Provinces made use of this provision to extend the Act to workshops engaged in the manufacture of bidis and glass respectively. The Central Provinces Unregulated Industries Act of 1927 was the first attempt in India to regulate conditions of work in workshops by law. The Act applied to workshops employing 50 or more persons and engaged in bidi-making, shellac manufacture, and leather tanning.

Regulation regarding conditions of factory labour, especially textile labour, had been comparatively elaborate before the war. The conditions in mines, on the other hand, had been extremely ill-regulated. The Mines Act of 1901 was a very ineffective piece of legislation. The Mines Act of 1923 remedied this defect. It widened the scope of legislation to include shallow workings also; it prohibited the employment of children under 13; it restricted the hours of adult labour to 60 hours per week overground and 54 hours underground, and it prescribed a weekly day of rest. The mine-owners were not much used to statutory regulation of labour and they were evidently not prepared immediately to put the Act into operation, and the Chief Inspector of Mines in his report for

the year 1925 stated that the employment of children had not been completely stopped even though the Act came into force from July 1924. The Labour Commission thought that weekly hours overground should be limited to 54 and that no child under 14 should be employed either in or about the mines. They recommended the re-examination of the question of underground hours, a greater representation of labour on Mining Boards and that greater attention should be paid to welfare activities in the mines area.

The changes brought about by the 1923 Act were large, but that Act still left one question undecided. And this was the question of the employment of women underground. The cause of the continuous persistence of this in India was the so-called 'family system' of working in the mines. The total abolition of the labour of women had been repeatedly advocated, but it had always been stoutly opposed by the industry as a measure that would result in upsetting the whole of its labour economy. The Mines Act of 1901 had given powers to the Governor-General to prohibit the work of women underground, but this power had never been exercised. When after 1922 the subject was reopened and opinions invited, strong opposition was met with from the Bengal and Bihar coal industry. It was chiefly in this and the Punjab salt mines that considerable female labour was employed. The arguments put forward against prohibition were that, as women formed a very large portion of the labour force, any immediate prohibition would create serious shortage of labour; that underground conditions were not physically harmful to women, or normally so, as the work was on the family system. On this last question, the opinion of the Chief Inspector of Mines was emphatic enough. He wrote, 'The family system is not always what it seems, for it is not unusual to find the carrier to be someone else's wife.' It was recognized that total prohibition must some time come about, but the Government took the view that sudden prohibition would be harmful to the coal industry. Regulations were therefore issued by which the underground employment of women was prohibited in the mines in all provinces immediately, except in the main coal-fields and the Punjab salt mines in which the labour of women was to be gradually

reduced. Complete cessation came about in 1938 after ratification by India of the international convention regarding underground work of women.

Another important piece of labour legislation was the Workmen's Compensation Act passed in 1923. Under it the workman was entitled to compensation for any injury arising out of or in the course of his employment and for certain industrial diseases. It applied to railway and tramway employees, factory and mine workers, seamen, dock labourers, building trade employees, linesmen, sewage workers and members of fire brigades. The Government of India was further empowered to extend by special notification the operation of the Act to workmen employed in any hazardous occupation. The scales of rates at which compensation was payable to a workman were laid down in the Act and special tribunals were set up under the Act to adjudicate in cases of dispute. The most important recommendation of the Labour Commission regarding the Act was that it should be extended to cover as completely as possible the workers in organized industry, whether their occupations were hazardous or not; and that there should be gradual extension to workers in less organized employment, beginning with those who are subject to most risk. They also suggested a number of minor amendments to the Act making the administration of it more liberal from the workers' point of view. Largely on the basis of the recommendations of the Commission a bill was framed and passed as an Amendment Act of 1933.

Another welfare measure which, however, was not adopted in all the provinces was the Maternity Benefit Act. The first Act passed in 1929 was in Bombay, followed by the Central Provinces in 1930. As a result of the recommendations by the Royal Commission on Labour similar acts were passed by the Governments of Madras, Ajmer-Merwara, Delhi, the United Provinces and Bengal by 1940. The provisions varied from province to province. The qualifying period entitling a woman worker to maternity benefit varied from six to nine months. The period for which the benefit was available was usually seven to eight weeks and the amount of benefit was ordinarily the average rate of women's daily earnings or from

eight to twelve annas a day, whichever was less. Generally, no provision was made for free medical aid.

The Payment of Wages Act (1936) sought to ensure that wages were paid to the workers regularly and also to prevent arbitrary deductions from wages or the imposition of unreasonable fines. The Royal Commission on Labour had suggested such legislation. It applied to persons employed on railways and in all factories subject to legislative regulation.

As a result of the report of the Royal Commission on Labour the Government of India and some provincial governments framed a number of laws—major and minor—relating to labour. However, adequate action was not taken for their enforcement. The chief reason was the inadequacy of the factory inspectorate in the different provinces. Another reason, also emphasized by the Royal Commission on Labour, was the light fines imposed by courts for breaches of the Act. 'Altogether one cannot resist the conclusion that, though there has been commendable progress in factory legislation in British India, there has been no corresponding improvement in the administration of laws.'[3] This was the appraisal of a competent authority. And this applied equally to all laws protecting conditions of work and remuneration of labour.

The evil effects of the rise in prices without a compensating rise of wages were felt by the labouring classes throughout India; the conditions on the tea plantations were, however, exceptionally bad. For the labourer here could hardly be described as free. In most cases it was long-term contract labour and the employers possessed extraordinary legal power over their employees and in many cases exercised many extra-legal restraints also. The committee which inquired into Assam labour conditions in 1922 found that on some gardens the wage had been unchanged for almost a quarter of a century. Even the planters themselves had come to recognize by 1918 that a rise was imperatively necessary and yet it was not granted till after 1920. The high price of cloth and food-grains had made the position of the labourer precarious and even where paddy allowances were given the

[3] Sir Atul Chatterjee, quoted in I.L.O. *Wartime Labour Conditions and Reconstruction Planning in India* (1946).

allowance was usually insufficient and the rice bad. The result of this was a distinct lowering of the already very low standard of living of plantation labour. The recruitment of labour was through garden sardars, chiefly employed in the congested districts of the United Provinces, Bihar and Orissa. The inducement for labour to emigrate could only be a higher wage and yet such was the tea garden wage in 1921-2 that many garden coolies who left the plantations, being dissatisfied with the conditions therein, were easily absorbed in their home districts on a higher wage. In some parts the distress caused was indeed so acute that there were a series of strikes and disturbances and from one locality an almost wholesale exodus. Ever since 1859 the relations of coolies and planters had been regulated by special legislation which gave what have consistently been proved to be unfair powers of control to the planter over his labour force. The Act of 1901 regulating certain kinds of long-term contracts was abolished in 1915 and the 1859 Act was further amended in 1920. The most important of the amendments introduced in 1920 was the provision which made contracts of more than a year's duration illegal—a provision stoutly opposed by the Tea Association and which, the 1922 Committee found, was in many cases openly violated. The contract, however, continued to be penal till an Act of 1923 repealed it as from 1926. Similar provisions governing the relations of planters and labourers continued in force in the Madras Presidency till 1929. The majority of the 1922 Committee held that the system of recruiting and controlling labour in Assam compared very unfavourably with the system of 'free' labour in the Dooars. This was also the emphatic opinion of the Labour Commission. The Commission, recognizing however that controlled recruitment could not immediately be done away with, recommended the abolition of the 1901 Act and its substitution by an Act which would be less restrictive and which would contain provisions to eliminate itself in due course. The Commission thought that the chief legal control exercised should be over the forwarding of assisted immigrants. They recommended the abolition of the Assam Labour Board and the creation of the office of a Protector of Immigrants. A very important suggestion made

by the Commission was that all assisted immigrants should after three years' service be given the right of being repatriated at the employer's expense.

Government passed the Tea Districts Emigrants Labour Act in 1932 to regulate recruitment for the Assam tea gardens only. It provided for the appointment of a Controller of Immigrant Labour to ensure that workers were recruited voluntarily, that they knew the conditions of service and that reasonable arrangements were made to forward them from their homes to Assam. The Act also gave the right to every emigrant labourer of being repatriated by his employer on the expiry of three years from the date of his entry into Assam. No action in relation to regulation or improvement of conditions of work or living of plantation labour was, however, taken. The Commission had also recommended that in view of the peculiar isolated position of the worker and the strong organization and prevailing 'wage agreements' among planters, it was desirable to set up a statutory wage-fixing machinery in the Assam tea plantations. This was not accepted by Government.

In discussing levels of wages and their movements it is necessary to note the large variations in India from industry to industry, from centre to centre and from unit to unit. The type of labour employed and the level of wages that obtained in Bihar coalfields were, for example, in sharp contrast to those in the iron and steel industry at Jamshedpur. In the cotton textile industry the average level of earnings obtained by the same classes of operatives differed widely from centre to centre. In the thirties in the centre of highest earnings in the industry, viz. Ahmedabad, the earnings of different classes of operatives were from two and a half to three times the earnings of operatives in the centre of lowest earnings, viz. Coimbatore. There were large differences in wages paid by different units even in the same industry and centre. The Cawnpore Labour Inquiry Committee found in 1937 that variations in earnings of workers from mill to mill in the same occupation were very wide. The smallest range was in the large group of ring spinners, viz. from Rs 12-5-0 to Rs 23-10-0 a month. The situation in the jute mills industry in Calcutta was among the worst. The levels and the sets of

differentials varied widely from unit to unit; they varied even in mills under the same management and situated in the same neighbourhood. The memorandum of the Bengal Government before the Royal Commission on Labour contained the following: 'Perhaps in no industry in the world situated in such a circumscribed area, is the wage position more inchoate.'[4]

An almost entire lack of any series of statistics makes it difficult to judge the movement of wages of labour during the period under review. Broadly there seems to have been no increase in wages till 1918 at all. Wages in industrial centres then rose steadily till about 1921. The percentage of the rise differed widely from industry to industry.

A somewhat detailed series of figures given in the Labour Gazette of Bombay[5] compares wages in the Bombay Presidency textile industry for the years 1914, 1921 and 1923. This shows in the actual monthly earnings of all work-people in the industry an increase from May 1914 to May 1921 of a little less than double in Bombay and Sholapur, and somewhat more than double in Ahmedabad and other smaller centres; while from May 1921 to August 1923 the figures show that the wages were stationary in Bombay, declined slightly in Ahmedabad and declined considerably in Sholapur and other centres. In the coal-fields wages were reported to have risen in 1919 and 1920 and to have begun to decline in 1925,[6] but it is difficult to gauge the extent of these movements. The Labour Commission recorded its opinion that by 1923 workers were generally better off than before the war.[7]

Because of the numerous inquiries conducted during the thirties data for the later period are more plentiful. However, owing to large variations of many types referred to above, and the lack of earlier data, it is difficult to generalize regarding movements of wages. A sharp downward movement in the levels of wages attained in the mid-twenties

[4] Quoted in R. K. Mukherjee, *The Indian Working Class*, p. 170 (1950).
[5] May 1925.
[6] Reports of the Chief Inspector of Mines for the years 1919, 1920 and 1925.
[7] *Report*, p. 196.

began in 1929. Broadly the movement tended to be related to the existing rationalization of the wage system and the organizational strength of labour. The reduction in earnings for the period was perhaps the least in Ahmedabad, where the weighted average of the decrease is reported to have been 8·4 per cent as between 1926 and 1937. In Bombay the corresponding percentage was put at 28·4. It should be noted that though the labour movement was very weak in Bombay after 1929 the Bombay Millowners' Association had formulated a minimum wage schedule which prevented too drastic cuts. Presumably the decreases were larger in centres where both labour and employers were less organized or where, as in Calcutta, neither the organization of employers nor the Government interested themselves in the question. Data given in the reports of the Chief Inspector of Mines would indicate a reduction of from one-third to half in the earnings of various classes of labourers in the Jharia coal-fields between 1927 and 1936. The earnings of tea garden labour in Assam were estimated to have declined by half between 1929 and 1936.

After 1927 prices began to fall; the fall was precipitate between 1929 and 1933 and an upward movement only became marked in 1937. This large fall in prices made it possible for workers to sustain themselves in spite of the reductions in wages. The fall in prices was set off to some extent by the decrease in the volume and security of employment. It is not possible to arrive at any satisfactory measure of the total improvement or worsening of the situation of labour in the thirties. This is, however, not of great importance as the large majority of workers were in any case living at the margin of subsistence. The main indicator of this was the prevalence of indebtedness among industrial workers in all centres in India. The exceptions were labourers in mines and on plantations. These were among the most lowly paid and had a depressed standard of living. However, they were drawn largely from tribals and were living in localities where neither avenues of expenditure nor money-lenders were near at hand.

The Royal Commission on Labour estimated that in most industrial centres the proportion of families or individuals

who were in debt was not less than two-thirds of the whole and that in the great majority of cases the debt exceeded three months' wages and was often far in excess of this. They also found that 75 per cent was a very common rate of interest on the loans contracted by labourers.[8] An inquiry made in Madras in 1935 found that 90 per cent of the worker families were in debt and that the average debt per family was Rs 262. An inquiry at Nagpur in 1941-2 revealed that 82 per cent of the families were in debt and that the average debt was Rs 189, which was more than four times the average monthly income. Comprehensive data in relation to indebtedness and other aspects of workers' standard of living are available in the report of the Labour Investigation Committee; but these relate to 1947.

The Royal Commission on Labour recommended a number of measures for dealing with workers' indebtedness. The Commission referred to the besetting of industrial establishments by moneylenders and recommended legislation to stop this practice. The Central Government did not pass any legislation in this regard, though the Bengal Government passed the Bengal Workmen's Protection Act in 1934 to punish those loitering near work-places with a view to recovering debts. A similar Act was passed by the Central Provinces Government in 1937. The Royal Commission also recommended legislation to liquidate the unsecured debts of workers. The only legislative action taken on this recommendation was the passing of the Central Provinces Adjustment and Liquidation of Industrial Workers' Debt Act, 1936. Another measure taken to safeguard workers' wages was the amendment of the code of Civil Procedure in 1937 so as to exempt from attachment any salary to the extent of the first Rs 100 and half of the remainder of such salary.

Conditions relating to recruitment and supply of labour and the emergence of a permanent industrial labour force did not change materially during the period under review. Recruitment through intermediaries called jobbers, sardars, mukadams or other local names was well-nigh universal. The Assam tea plantations, which had to recruit their labour

[8] *Report*, pp. 224-5.

from a long distance, had an elaborate machinery for recruitment which needed to be put under some legislative control. Plantations in the south which recruited their labour from neighbouring areas did this through local recruiting agents. In the coal-mines labour was recruited through contractors who recruited labour and were also usually responsible for some aspects of raising coal. In organized urban industry also recruitment of labour even when made at the factory gates was usually through the agency of a jobber. In only a few cases were deliberate attempts at improvement reported. At Cawnpore the Employers' Association set up a Bureau for the recruitment of labour for member factories. The textile mills at Bombay and Sholapur tried to regularize recruitment by a system of controlling the employment of the floating non-permanent substitute labour called *badlis*. The *badli* control system was devised with the two-fold purpose of giving *badlis* regular employment and eliminating the influence exercised by the jobber in the recruitment of labour.

Indian labour was migratory in the sense that to a large extent it was not recruited from the residents of the place at which the unit of work was situated. Such migration is inevitable in the early stages of industrial growth. However, if migration continues even after industry has been established for a long time at a centre and affords a continuous demand for a fair volume of labour, this must be due to special factors. On the Assam tea gardens local labour was not available and the planters found it desirable to give imported labourers rice land or garden plots and turn them into part-time agriculturists to retain their services on at least a quasi-permanent basis. On the coal-fields of Bengal and Bihar there was a fair supply of local aboriginal labour. Because of this the wage level in these areas remained low, lower than in many mines in other parts. However the bulk of this labour supply was drawn from small agriculturists and, therefore, the supply was largely seasonal and varied inversely with the quality of the agricultural season. Conditions conducive to the creation of a permanent complement of industrial labour were reached in medium-size industrial centres surrounded by an agricultural region with a fair supply of landless

labour. This was the case in centres like Sholapur, Nagpur and Coimbatore. In the larger centres like Bombay, Calcutta and Cawnpore, a number of conditions militated against the emergence of a permanently settled labour force. The wages may be low, the work may be exhausting or the conditions of living, particularly of housing, may be atrocious. Wages in the Calcutta jute industry could not attract local labour though they attracted immigrant labour from Bihar and the U.P. Conditions of work and living together put too great a strain on the labourer and he reacted by occasional absence from work and, wherever possible, an annual visit to his village. This explained the prevalence of what was described as absenteeism. A contemporary observer recorded: 'The question of time-keeping is very important in India. In many ways it serves as an index of the state of fatigue produced. Where wages are good, men do not stay away for trifling reasons. They do so primarily to restore the energy they have expended at their work.'[9]

Perhaps the most important factor retarding the establishment of a permanent labour force was the inadequate housing. Conditions were very bad in most large industrial centres and most observers were agreed that there was no possibility of continuing family life under the housing conditions in them. Appalling conditions of overcrowding in Indian cities were brought out by the data set forth in the Census of 1921. According to these, 70 per cent of the total Bombay population lived in one-room tenements with an average of more than 4 persons per room. In one section of the city 96 per cent lived in one-room tenements with 5 persons per room. Conditions in Karachi were even worse. In Cawnpore 64 per cent of the population lived in one-room tenements. The Royal Commission on Labour gave vivid descriptions of the bustees of Bengal, the chawls of Bombay and the cheris of Madras. It reported: 'Overcrowding and congestion, particularly in certain parts of Howrah, is probably unequalled in any other industrial area of India.'[1] 'In the majority of cases these chawls are impossible

[9] Broughton, *Labour in Indian Industries*, p. 188 (1924).
[1] *Report*, p. 272.

of improvement and therefore fit only for demolition.'[2] 'In Madras city 25,000 one-roomed dwellings shelter 150,000 persons or one-fourth of the population.'[3] In Ahmedabad in areas occupied by working classes 'nearly 92 per cent of the houses are one-roomed; they are badly built, insanitary, ill-ventilated and overcrowded.'[4] During the inter-war period some employers, particularly in places like Madras, Calcutta and Nagpur, had constructed improved dwellings for their workers, and in some centres like Bombay, the Government and local authorities had undertaken similar effort. However, this touched only a fringe of the problem. Inquiries conducted towards the end of the thirties showed that the large majority of workers in cities like Bombay, Ahmedabad, Cawnpore and Madras continued to live in one-room tenements and in conditions similar to those described by the Royal Commission on Labour.

Labour migrated to industrial centres in India predominantly from rural areas. Most labourers had thus some connexion with land and the village. The non-emergence of a permanent labour force in industrial centres meant that this connexion was always kept up. In some cases the connexion meant interest in agricultural activity and the visits to the village might be timed accordingly. In a city like Bombay, however, it probably meant no more than that the majority of workers had a village home to return to. The worker had to cling to this connexion for occasions like unemployment and illness, for the birth of his children and for major social activities, for all of which he found no provision in the city. There were obvious costs connected with this phenomenon. But, given the circumstances, the Royal Commission on Labour held that it was desirable to maintain the factory workers' link with the village and, as far as possible, to regularize it.

[2] *Report*, p. 273.
[3] *Report*, p. 274.
[4] *Report*, p. 277.

CHAPTER XVIII

Traditional and Small-Scale Industry, 1914-39

The field of industrial production outside that of modern mining and manufacture was large and varied. The vast bulk of those registered in the Census as engaged in industry were outside the modern sector. In the context of older technological modes of production, industrial production was oriented in the main to the production of consumer goods. In all these, however, the range of variation in types of product and form of organization was very large. In textile production, the range was exhibited by the highly artistic kincob of Ahmedabad or sarees of Benares on the one hand, to coarse chadar woven on a village pit loom on the other; the similar range in metal-work would be from demascene or *bidri* work to a ploughshare produced by the village blacksmith.

The modern organized sector of industry whose growth has been traced in some detail was entirely new. The rest of the industrial structure was for the most part a carry-over or adaptation of earlier and traditional forms of industrial activity. Under the impact of changed political and economic conditions some of the older forms of activity suffered rapid decline. Attention has been drawn to the fate of the most skilled and sophisticated of these, viz. the urban luxury handicrafts. At the other end, activities like that of hand-spinning and iron-smelting, where the superiority of advanced technology was extremely marked, also suffered rapid decline. Elsewhere a variety of changes took place. Generally there was a shrinkage of the field of production and of coverage of demand. The fields retained were mostly through adaptation of product, improvements in tools and technique, availability of new types or sources of raw material; the process was also helped by sheltered markets, or consumer resistance to the new and preference for the old. In fields where

production and demand were both widespread, such as those of textiles, metal-work, wood-work and leather products, there was stratification, e.g. urban luxury handicraft, urban utility industry and rural utility production.

The services and products of some industrial artisans were in such universal and continuous demand that they were usually incorporated in the structure of the village community as paid artisans. The blacksmith, the carpenter, the leather-worker and the potter were generally so included. The weaver was the most important of artisans not to be so included and there was consequently a greater degree of specialization and locational concentration to be found in the handloom industry. Industrial activity which was resource-bound was, of course, highly localized. This happened with mineral-mining and smelting and in forest products. Production of paper and glass was also localized. The displacement of older industrial activity depended also in part on the turn taken by scientific progress; so that while iron-smelting,[1] saltpetre-collection and indigenous dyes went out, the lac and mica industries continued to function. Displacement was usually complete in the simpler preliminary processes but even here circumstances led to differentiated results. For example, while cotton ginning and spinning were almost completely mechanized, hand-pounding of rice continued to be the dominant mode of processing in many areas. At the same time, it was because of acceptance of the machine products of the earlier stage that hand industry was enabled to survive at the later stage. 'The weaver has taken to mill yarn, the dyer to synthetic dyes, the brass and copper smith to sheet metal, the blacksmith to iron rolled in convenient sections. The tailors invariably employ sewing machines, and town artisans readily take to improved tools of European or American manufacture.'[2]

The results of all these series of changes and adjustments were reflected in all aspects of industrial activity such as

[1] However, a survey conducted in 1945 noted that 'in the Khondmals the village blacksmith can even now profitably smelt iron and make articles which in point of durability can compete with the imported articles.' Dr H. B. Mohanty, *An Industrial Survey of Orissa*, p. 13 (1946).

[2] *Report of the Indian Industrial Commission*, p. 162 (1918).

types of products, methods of production, organization of productive and marketing activity and the coverage and character of markets. It is not possible to judge of the variations in numbers of different classes of artisans over a period of time. The decennial censuses contain information regarding the occupational classification of the population, but the scheme of classification and methods of enumeration were not uniform from census to census. Also, examination of the comparative figures for specific important categories enumerated in particular regions or locations in successive censuses raises doubts regarding their utility for indicating historical movements. The Fact Finding Committee which examined exhaustively the data relating to the handloom industry also did not rely on census figures. The census figures could, however, be used for indicating the relative numerical importance of different categories of industrial activity in the country at any point of time. The occupational data of the 1941 census were not tabulated in full. The 1931 census reveals the following broad picture. The total number of workers enumerated by the census was 1,539 lakhs of which 154 lakhs, i.e. a little over 10 per cent, were classified as industrial workers. The most numerous of industrial workers were textile workers. These numbered 41 lakhs; of these 29 lakhs were engaged in cotton weaving and its preparatory processes. Carpenters numbered a little over 9 lakhs and potters about 8·7 lakhs. The other important classes were tailors, milliners, etc. 6·5 lakhs; basket-makers and similar workers 6·4 lakhs; masons, painters, stone-cutters and other workers in the building industry 6·2 lakhs; metal-workers (chiefly blacksmiths) 7 lakhs; rice-pounders etc. 5·6 lakhs; oilmen 5·5 lakhs; rope, twine, string etc. makers 3·2 lakhs (included among textile workers) and workers in leather 3 lakhs. Included as workers in industry were also nearly 11 lakhs of washermen and 7 lakhs of scavengers.

The report of the Fact Finding Committee (Handloom & Mills) appointed by the Government of India in 1940 supplies full data regarding the extent and characteristics of the handloom weaving industry and throws considerable light on the fluctuations in the fortunes of the industry, especially during the period 1914 to 1939. After an examination of the

relevant historical statistics the Committee comes to the conclusion that there was no decline in handloom production in India after 1895. By 1895 the transformation of the Indian hand-weaving industry from one using handspun yarn to one using mill-made yarn had been completed. This had been brought about both by increases in imports of yarn and the production of yarn by Indian mills made available to the handlooms. In the nineteenth century, imports of yarn grew steadily between the fifties and the late nineties, and during the same period the Indian cotton mill industry grew chiefly as a manufacturer of yarn. The decline of imports of yarn in the first decade of the twentieth century and the increasing emphasis of the Indian mill industry on weaving indicated that by this time the replacement of handspun yarn by mill yarn had been completed in the handloom industry. On this assumption an estimate of the production of cloth by handlooms can be based on the total availability of mill-made yarn (Indian and imported) to the handlooms. An examination of these data indicates some increase in their production during the fifteen years before 1914. The increase in production does not, however, indicate that the number of workers in the industry did not decline. The improvement of technique, particularly the adoption of the fly shuttle in some areas, would increase productivity per worker and some increase in production was compatible with some decline in the number of workers.

Production suffered a setback in the period of the war. This was the result of the dependence of handlooms on the supply of mill yarn. Conditions of war limited imports of both yarn and cloth and prices of cloth rose high in India; this made it profitable for Indian mills to convert as large a quantity of yarn production as possible into cloth. Consequently, the supply of mill yarn to handlooms was greatly curtailed and their production of cloth decreased. To some extent the effects of the reduction were compensated by increased prices, but the handloom economy was disrupted in many centres. In the post-war period mill yarn was more freely available and the production of cloth by handlooms resumed its slow pace of increase. However, the change in the relative position of Indian mills and handlooms as sup-

pliers of cloth to the Indian market which had been initiated at the beginning of the century was now accelerated and resulted in creating new problems for the handloom industry. About 1901 the production of cloth of mills was only about half of that of the handlooms; by 1914 this relation was that of rough equality. During the war years the proportion was highly disturbed by lack of supply of mill yarn to handlooms, but even when this supply became more ample the production of cloth by mills was higher by about fifty per cent than that of the handlooms. Due to steady increase in the capacity of the mills and the relative stagnation of handlooms, mill production of cloth was double that of handlooms by the beginning of the thirties and about two and a half times at their end.

Part of the gains made by the Indian mill industry were made by displacing imports but in part the growth of the industry began to impinge on the markets of the handloom industry. This was facilitated by the change in fashions, from highly specialized and relatively elaborate types of cloth to more standardized and simpler types, that was taking place in men's and women's clothing concurrently. Indian mills turned to production of types of cloth suitable for women's wear after 1925. This incursion of mills into areas hitherto considered the special reserves of the handloom industry had a many-sided effect. It affected the export markets of Indian handlooms and also led to imports of similar types of mill-made cloth from abroad, especially Japan. The duty on imported fine yarn imposed to protect Indian mills also impaired the competitive capacity of the handloom in both the internal and external markets. The operations of all these factors coincided with the onset of the depression and led to unprecedented worsening in the conditions of the handloom weaver. The deterioration was not reflected in a fall in cloth production.

'Since the handloom weaver cannot regulate his production according to the state of the market without risking starvation for himself and his family the true criterion for judging the position of the handloom industry is not the proportion of the quantity of cloth woven on handlooms to the total production but the wage earned by the handloom

weaver.'[3] The deterioration in the industry was thus reflected chiefly in a considerable lowering of the earnings of weavers. Actual unemployment was seen in the statistics of idle handlooms; this was estimated at about 13 per cent in 1940 by the Fact Finding Committee. In regard to earnings the conclusions of the Fact Finding Committee were that between 1928 and 1940 there had been a drastic fall in earnings of hand-weavers throughout the country and that the fall was in some cases as high as 70 or 80 per cent, that the earnings in 1940 were extremely low indicating inadequate employment and meagre remuneration, and that the majority of hand-weavers were paid at a rate no better than that of unskilled labourers.

The Fact Finding Committee found that over the decades the rural hand-weaving industry had declined and it now tended to be largely an urban handicraft. In the process there had come about a noticeable localization of the industry coupled with a great deal of geographical specialization in types of production. However, there was considerable similarity in the types of organization. The independent weaver predominated only in backward areas, where coarse cloth was produced chiefly for local use. Elsewhere, depending on supplies of mill yarn and producing for distant markets, the weaver had middlemen for supply, for finance and for marketing. The cost of yarn to the weaver was high owing to the intervention of the many middlemen; the organization of marketing of handloom products was also very costly from the weavers' point of view. The spread of the co-operative form of organization had as yet been nominal. The predominant forms were, therefore, of a master-weaver giving employment to weavers, usually of his own caste, in their own homes, or of a merchant of yarn or cloth or both doing the same, or a *karkhandar* bringing the weavers together in a small factory with suitable looms and other equipment provided for them. In each case the dependence of the weaver on the middleman-employer was complete.

There were variations in the fortunes of the industry from centre to centre and from state to state. On examination of

[3] Tariff Board (1932), quoted in report of the Fact Finding Committee, p. 22.

the available data the Fact Finding Committee concluded that there was clear evidence indicating an increase in the number of looms in Madras between 1920 and 1940 and a decline in the number of looms in Bengal during the same period. Variations in the fortunes of centres depended partly on extraneous factors; they were also, in part, related to the adaptability shown by the local industry in regard to types of product, acceptance of new materials such as dyes or artificial silk fibre, and adoption of the fly shuttle and other technical improvements. An innovation of this period, which was to have considerable future impact, was the introduction of power-looms. These were installed individually or in small factories and produced fabrics similar to those of handlooms. They had certain advantages over a limited range of products, as compared with both handlooms and mills. They were being set up mostly in the handloom weaving centres and largely by the better-off among weavers; there was high concentration of their numbers in Bombay Presidency.

The policy of provincial governments towards cottage industries in general and handlooms in particular changed after the Reforms of 1919. Madras, which had earlier initiated the abortive attempt to help the industry through departmental experimentation, took the lead in the matter. In the twenties almost all provinces and large states with considerable number of handlooms took steps to start training and demonstration schools and centres for weavers. These spread the use of fly-shuttle sleys, dobbies, jacquards and other improved appliances and also improved preparatory processes and methods of dyeing and printing. All this effort had no effect on the fast deteriorating situation after the depression, and provincial governments, particularly Madras, urged the Government of India to help through imposition of excises and cesses. The Government of India did not accept this proposal but ultimately agreed to give a grant to provincial governments to help the handloom. This grant was first given in 1934-5 and amounted to a total of Rs 5 lakhs per annum. It was to be used by provincial governments for improvements in supply of yarn and marketing of cloth, providing facilities for finishing of cloth, and helping in more efficient production. The governments were

given considerable latitude in agencies used and in drawing up individual programmes. The amount of the grant was small and it could make only a limited impact in a few provinces. The continued distress of handloom weavers and their complaints against mills of unfair competition caused the Government of India to give further attention to their problems and led to the appointment of the Fact Finding Committee in 1940.

No important change came about in the condition of the rural artisans during the inter-war period; the trends noticed in the earlier period continued their operation unchecked. The class of artisans regarded as rendering service to the village community as a whole was paid in part by a share of the crop. The arrangements regarding these payments differed from artisan to artisan and from region to region. They were also subject to adjustments and changes over a period. In instances like those of the carpenter and the blacksmith, whose services were essential for agricultural operations, there was no erosion in traditional remuneration. However, this might not be so, for example, with the potter. The erosion usually took the form of cultivators reducing the traditional share in one way or another and ultimately even denying it altogether. The process was, no doubt, uneven and gradual but it rendered the position of a number of classes of village artisans still more precarious and drove them to depend on labour to a larger extent than before. Among rural artisans whose spread was well-nigh universal but who were not paid by a share of the crop, the position of the oilman distinctly worsened during the post-war period. This was because of the rapid spread of mechanical processing of oil. Even the rural market of the oilman began to shrink because of the competition of mill oil. The full complement of village artisans was to be found only in the large villages, catering for the needs of the surrounding hamlets and smaller villages. Artisans not bound to the village tended to concentrate in larger villages or near sources of supply of raw materials.

Sericulture was almost everywhere an occupation subsidiary to agriculture and was mostly confined to parts of Mysore, Bengal and Kashmir. Silk-weaving was, however,

even more concentrated and urbanized than cotton-weaving. Weaving based on wild silk, produced in the Central Provinces, Bihar & Orissa and Assam, was more rural based. The weaving of rough country blankets was common in many part of India. In the Punjab there was a considerable wool handloom industry and the making of cheap blankets was a very important village industry in and around Panipat.[4] Another large group of cottage industries was represented by basket-making, mat-making and cane work, rope and string-making, the manufacture of coir, etc. The existence of these depends on suitable raw materials being locally available. Basket-making from one or another kind of material was well-nigh universal though one of the least remunerative of by-occupations. Flax, hemp, jute and coir were the raw materials for another group of occupations in different parts of the country. Rope- and string-making from jute were carried on to a large extent by women in the jute district of Bengal, while the manufacture of coir was the principal cottage industry of Malabar and was indeed so important that 'coir yarn is to some extent the currency of the coast'.[5] Industries connected with the use of shells, horns, etc., were also distributed with respect to local supplies of raw material.

Historical trends relating to the number of workers in particular occupations have to be assessed on the basis of general indications. It would be safe to surmise that while the number of handloom weavers or carpenters remained steady or increased slightly, the number of potters or oilmen tended to decline over time. The process was, however, gradual and slow. Because of the non-availability of alternatives, artisans would leave occupations only when push factors operated strongly; also the tenacity of old habits and consumer preferences and the poverty of the large mass kept up a large though shrinking market for the services of the artisans.

Trends towards urbanization, localization and geographical specialization noticed in the case of handloom weaving also operated generally in the artisan industry. All those whose presence in the village was not required for day-to-day operations tended, with improvement of transport facilities

[4] Badenoch, *Punjab Industries* (1917).
[5] *Report of the Census of the Madras Presidency* (1921).

and the increasing monetization of the economy, to concentrate in the smaller and larger towns. As in textiles there was in most artisan industry some adaptation of products and some improvements in technique. Among consumer durables the most important requirement of the Indian household was for cooking and other utensils. The brass, copper and bell-metal ware industry was, therefore, an important feature of all regions. The gold- and silversmith was also ubiquitous. There was both localization and geographical specialization in the metalware industry; presses began to be used to shape vessels and the workshop became a common organizational feature. Similar tendencies were observed in connexion with industrial activity based on wood and leather. The artistic handicrafts, demand for whose products had previously shrunk, also achieved a kind of equilibrium in particular centres with specialized products. Apart from the superior textiles and embroidery there were ornamental metalwork with specialities like demascening, *bidri* or filigree work, products of ivory, sandalwood or horn, lacquer ware, woollen pile carpets, etc.

Lack of finance and of contact with sources of raw material or markets, when they were not local, characterized all artisan industry, urban and rural. The result was complete dependence on moneylenders and trader intermediaries, high costs and low earnings. The picture presented in this regard is the same whether in surveys like those of U.P. or Bengal districts in the early twenties or in the reports of the Bombay Economic and Industrial Survey Committee (1938-40) or in the official replies from various provinces and States to the questionnaire (1939-40) of the Rural and Cottage Industries Sub-Committee of the National Planning Committee. Even about an industry like basket-making we read 'Marwari middlemen supply cane on credit, and appropriate the greater share of the income'.[6] The Bareilly furniture industry may be cited as an illustration of conditions in a relatively skilled and remunerative activity. In this place, on account of the work of the Government Carpentry School, a better class of carpenters had come into existence. But as the artisan

[6] *Survey of Cottage Industries in Bengal*—Nadia District (1924).

could not get into touch with his customer and as he was in continuous need of capital, the industry was in the hands of middlemen and the artisans were not, as a rule, prosperous. The absence of middlemen in an industry did not necessarily improve matters. It is noted, for example, that numerous bodies of blanket weavers in Meerut district had to obtain their supplies of raw wool each year by going personally in groups to Rajputana and the Punjab.[7] The survey material relating to the end of the thirties emphasizes not only the great dependence of the artisans on the middlemen but also the decline in many cottage and small-scale industries which took place in the thirties.

It was only an exceptional conjuncture of circumstances that enabled an industry to progress continuously and to give the artisans a relatively fair deal. An instance is the Surat gold and silver thread industry. The gold and silver thread industry flourished in a large number of cities in India in the nineteenth century. The Bengal monograph on the wire and tinsel industry dates the beginning of the decay of the Calcutta industry from 1877, when a German manufacturer took samples from Calcutta and began to import machine-made thread. The Calcutta industry held its ground as long as machine-made imports were of an inferior quality. However, by 1897 the quality of imports had improved and the industry declined rapidly. In Delhi, decline of the controlling guild first led to deterioration of quality and afterwards foreign competition depressed it. In Bareilly, where some mechanical improvements were adopted, only inferior stuff for local demand was turned out with imitation material. Surat was the most progressive centre of the industry and improvements in methods of production had begun to be introduced in it even before the war. Even so the industry at Surat was in a declining condition almost up to 1920. After the war further improvements in methods of production in Surat were helped by Government provision for training abroad. The post-war period witnessed a remarkable revival largely because of the imposition in 1922 of a revenue duty of 30 per cent on imported gold thread and

[7] *Industrial Survey of U.P. Districts*—Meerut.

because the lowering of gold thread prices after the war induced increased consumption of it in India. The Tariff Board, which conducted an inquiry on the industry in 1930, found that the chief centres of the Indian industry, viz., Surat and Benares (more especially the former), had captured the whole of the market in North and West India. The handloom weaving industry of the Madras Presidency, however, used in the main the finer quality imported thread. The Tariff Board recommended an enhancement of the duty to 50 per cent partly to counteract the effects of the duty on silver and partly to increase the protection already afforded by the revenue duty. This resulted in revitalizing the industry and enabling it to continue its progress. Adaptation in organization and adoption of improved methods and processes in the various stages of the industry were continuous and showed considerable sensitivity and ingeniousness. The degree of continuity in the social composition of workers and traders was remarkable and, through organizing themselves, workers in various processes were enabled to obtain a relatively fair deal.[8]

In course of time new artisan types of industries were added to the traditional list. Following the construction of roads and the commercialization of agriculture the manufacture of country carts had become an important but highly localized activity throughout the country. During the inter-war period it also suffered from stagnation and decline. Initially this was due to the introduction of the motor car for goods traffic within cities; a more severe check was experienced when motor bus transport spread to country roads.[9] Another activity which was widespread and gave considerable employment, though at a very low wage, was the making of bidis or country cigarettes. The workers in this activity were employed, in the main, on wagework in their own homes; however, production had also begun to be organized by congregating a large number of workers in one place.

[8] For a full account see R. K. Patil, *Gold and Silver Thread Industry of Surat* (1956).

[9] The number of labour (bullock) carts plying in Bombay city for goods transport declined from 9,528 in 1918 to 1,387 in 1933. Gadgil & Gogate, *Motor Bus Transportation in Six Districts*, p. 78 (1935).

The resulting conditions had attracted the attention of the Royal Commission on Labour. Soap-making on a small scale was another activity which had become widespread.

With increased industrial activity and urbanization after the war a number of new small-scale activities became important, chiefly in the larger towns. Examples of these were the making of trunks, safes and cupboards, furniture-making, electroplating, locks and cutlery. With the introduction of motor bus transportation, together with considerable maintenance and repair activity, were introduced such activities as motor-body building and manufacture of automobile parts. Similarly in centres of large industry there arose activities like the manufacture of parts of mill and other machines and the making of roller skins and pickers.

Apart from changes in Government policy noticed later, some artisan industries profited from the strong backing given by political parties especially the Indian National Congress to the revival of village and small-scale industry. The main emphasis was on khaddar, i.e. cloth handwoven from handspun thread, and the result was a considerable revival of the almost extinct activity of hand-spinning. However, the non-official All-India Village Industries Association took a systematic interest in a number of other industries. It was responsible for rehabilitating to some extent the hand-made paper industry, supporting hand-pounding of rice, modernizing bee-keeping and the making of honey, improving the country oil-mill and introducing other changes. The change in attitudes created towards products of indigenous industry by the political movement had also, at least temporarily, considerable effect on the general demand for them.

Industrial Policy

The war brought out in a striking manner the industrial poverty of India and made Government realize the national importance of an all-round industrial development. Government control of trade and industries was progressively undertaken, and as the war proceeded the necessity of actively stimulating certain industries became urgent. The need for munitions was specially insistent and in February 1917 a

Munitions Board was set up as a result of a suggestion of the Commander-in-Chief. The Board was given wide powers; its chief object was to develop Indian manufacturing resources and apply them for war purposes. It was also found that it was not enough to stimulate and regulate production; some of it had to be undertaken by Government itself. An acetone factory and army clothing and leather goods factories were thus started.

Indian public opinion had always clamoured for active assistance to industries being given and at last Government appointed in 1916 an Industrial Commission, specifically to inquire as to how direct encouragement to the development of industries could be given by Government. Tariff policy was excluded from the Commission's terms of reference. The Commission reported in 1918, calling on Government to initiate a policy of energetic intervention in industrial affairs. It recommended the establishment of imperial and provincial departments of industries, the organization of scientific and technical services, especially an All-India Chemical Service, the affording of greater facilities for industrial and technical education, an alteration in the policy of purchase of stores by Government and even more direct help being given to industry by certain kinds of financial assistance and by starting 'pioneer' and 'demonstration' factories. These recommendations were in the main accepted both by the Imperial and the Provincial Governments. In the meantime, the exigencies of war finance had compelled Government to levy heavy revenue duties on imported commodities, and the absolutely perfect standard of free trade to conform to which, so it was said, the Cotton Excise duty had to be levied, was temporarily given up.

The grant of Reforms coming soon after the war made possible the inauguration of a new fiscal policy. A Fiscal Commission was appointed in 1921 to determine the nature of this policy. The Commission came to the conclusion that the industrial development of India had not been adequate and that the further development of Indian industries would be to the country's advantage. It also laid down that a protectionist policy was necessary to attain this end. But while the majority advocated discriminating protection, the mino-

rity did not want to limit or qualify the policy of protection in any way. The majority recommended that discrimination should be used in the selection of industries for protection and in the degree of protection afforded so that the burden on the community might be as light as possible; that a Tariff Board be created to investigate the claims of particular industries to protection; and that this Board, in dealing with claims to protection, should satisfy itself that (i) the industry possessed natural advantages; (ii) it was not likely to develop at all or not so rapidly as was desirable without the help of protection; and (iii) it would eventually be able to face world competition without protection. These recommendations were accepted by Government and a Tariff Board was appointed in July 1923.

Thus, within a decade of the outbreak of the war, a complete change had come over the policy of the Government of India in relation to industry. As a result of the Reforms, industries became a provincial subject and the recommendations of the Industrial Commission were given effect to by the provinces in various ways. At the outset Departments of Industries were started in every province, but later, owing to financial stringency and other reasons, the activities of provincial governments were not everywhere directed with equal vigour. The project of the All-India Chemical Service was dropped in the initial stages and provincial governments followed their own separate lines of action. Provincial governments attempted to tackle particular industrial problems. Individual industries were enabled by means of provincial legislation to tax themselves and undertake research work out of the proceeds, as in the case of indigo and lac. Technical education made a certain amount of headway and small weaving schools were established in almost every province. The handloom weaving industry was helped by demonstration parties and peripatetic instructors. As regards more direct help, demonstration factories were started in many provinces, but most of them failed. A number of provincial governments passed Acts under which they gave financial assistance to industries. Financial assistance given by provincial governments to large concerns mostly failed. Smaller loans given to small industrialists proved more use-

ful. The depression, however, made it difficult for provincial governments to finance an active industrial policy and affected the prospects of artisan industry as well as the modern small-scale industry. The Government of India also effected a change in its stores purchase policy. Following the recommendations of the Stores Purchase Committee, a Stores Department was set up, and it was accepted that distinct preference should be given to articles of indigenous manufacture as long as the price was 'reasonable'.

By far the most important assistance was that given by protective duties or by bounties. The Tariff Board was set up in July 1923 and inquired into the claims to protection of various industries. It was on its recommendations that help in various ways has continuously been given to the steel industry; and it is not too much to say that the successful establishment in India of the iron and steel industry was made possible by the changed fiscal policy of Government. The results achieved by the policy in relation to other large industries have already been noticed.

CHAPTER XIX

Railways and Roads, 1914-39

THE period of the war was one of great difficulty for railway administration. The carriage of troops and war stores imposed a heavy burden on the railways, and the fact that the greater part of the coal had to be carried during the war years on railways rather than by sea added to their burden. While the service to be performed by railways was thus considerably increased, there was deterioration in railway equipment in India. Government could not carry out repairs or extensions because of inability to obtain railway stores and other materials, and because it was necessary to supply rolling-stock and railway stores for war purposes in Mesopotamia. The Mackay Committee estimated that from about 1905 railway facilities in India began to prove inadequate for the demand made on them, and the position on the eve of the war was far from satisfactory. It became very much worse during the war years. To meet the situation Government appointed in 1917 a Controller of Traffic and later on a Central Priority Committee to regulate traffic according to the relative claims of the different classes of commodities. For dealing with the special problems of coal purchase and its transport the office of Coal Controller was created. Though most of these restrictions on traffic were withdrawn by 1919 the control of coal traffic by the Coal Transportation Officer remained in force for some time after.

Trade has necessarily to submit to stringent regulations during wartime, but as the difficulties continued and became even worse during the post-war boom year, 1919-20, public opinion was loud in calling for speedy improvement. The extent to which railway facilities fell short of public requirements during this time will be clear from the evidence on the point summarized by the Acworth Committee.[1] It was

[1] *Report*, chap. ii.

also in the year 1919 that the contract made by Government for the working of the East Indian Railway was due to expire. Therefore, to consider the question of the future management of Indian railways and generally all cognate questions, a Committee was appointed by the Secretary of State in 1920, which reported in 1921. The proposals made by this committee have largely shaped subsequent railway policy. The committee was unanimous in condemning the existing method of financing railways. The policy of annually allotting a sum for the capital programme of the railways according to the exigencies of the financial budget, while no reserves were built up for railway purposes, was in the committee's opinion responsible, in the main, for halting and irregular development and for wasteful expenditure. It also led to inadequate expenditure on maintenance and renewals. To remedy this defect, the committee advised Government to take the drastic step of separating the railway budget from the general budget. On the question of the constitution of the Government organ of control, the committee recommended the creation of the office of a Chief Commissioner of Railways and an entirely changed constitution and functions for the Railway Board. For bringing railway administration into closer touch with the public and bettering the relation of railways and their customers, the committee recommended the setting up of the Rates Tribunal and of representative Advisory Railway Councils. On the question of management the committee was divided. The committee was unanimous in condemning the practice of managing Indian railways from London, but while the chairman and four other members recommended that, as the contracts with the guaranteed Companies fell in, the state should undertake the direct management of these railways, the other five members recommended the continuance of both the systems of company and state management, and proposed a scheme for the creation of an Indian-domiciled company to take over the management of the East Indian Railway.

Indian public opinion was definitely in favour of direct state management and in 1923 the Legislative Assembly resolved in favour of taking over the East Indian and the

Great Indian Peninsula Railways under Government management. These railways were thus taken over in 1925 and Government was then definitely committed to the policy of direct state management. Thereafter, the principal railways were to be taken over for direct state management on the termination of the contract with the working companies. The Burma Railway, also, was taken over in 1929; the others were taken over between 1942 and 1944. The policy for a separation of the railway budget was also accepted by the Legislative Assembly in 1924 and on making an annual ascertained contribution to the general revenues, railway finance was made entirely independent of the vagaries of the annual general budget. Reserves could now be built up and elaborate programmes to be carried out over a series of years could be safely undertaken. Suitable changes in railway organization, somewhat on the lines recommended by the Acworth Committee, were also carried out during these years.

The rates policy of the Indian railways had for many years been subjected to severe criticism by the public, the charge being freely made that the rates were made specially favourable for the export and import of commodities and unfavourable to the interests of internal industries and trade. The Industrial Commission also concurred largely in this opinion. From the very beginning the rates policy of Indian railways was to make high charges rather than to develop traffic. The guarantee to the companies had taken away from them all incentive to attract traffic. And Government had not been able successfully to influence or control the rates policy.[2] Another objectionable feature of the rates policy had been the system of charging block rates by the different companies to divert traffic from one another and in some cases this device had been ruthlessly used in killing the competition of other means of communications, such as in the case of the Broach Steamship Company. Sometimes also the distinctly higher rates for a shorter haul than a longer one, such as the case cited by the Stores Purchase Committee, the freight from Bombay to Lahore being less than the freight from

[2] N. B. Mehta, *Indian Railways*, chaps. iv and v.

Jalgaon to Lahore, justified this complaint substantially.[3] Further, there were too many special rates, and the whole rates policy wanted overhauling. It was to remedy these grievances in some measure that a Rates Advisory Committee was set up by the Government of India in 1926 to consider and report on any complaints by members of the public against any particular rates.

The year 1919-20 was one of peculiar congestion on the railways. Congestion was, however, early relieved by the depression in trade that followed. This depression had the effect, taken together with the larger programmes of renewals and the higher costs of working, of making the railways for almost the first time since 1900 a heavy liability instead of an important source of revenue in 1921-2. Trade and passenger traffic, however, recovered early from the depression and within two years the railways were again making considerable profits.

The acceptance of the Acworth Committee's recommendations and the separation of the railway budget made possible a continuous and bold policy of railway expansion. Large programmes for capital expenditure were drawn up and it was estimated that these would mean an annual addition of nearly a thousand miles to Indian railway mileage for some years to come. The most notable feature of this programme was the comparative absence of long trunk line projects. Apart from the two lines making the connexion of south with central and northern India easier—the Raipur-Vizagapatam and the Kazipeth-Ballarshah lines and the lines through the central Indian coalfields—the new railway projects numbered nearly 100 and averaged not more than 49 miles apiece. The policy was to fill up the interstices of the network of trunk lines with useful branches and feeders—the absence of which had long been complained of.

This programme of expansion could be pursued only during the years 1924 to 1932. The total railway mileage added during this period amounted to 5,360 miles. In 1924 the total route mileage of Indian railways had stood at 38,039.[4]

[3] The Acworth Committee did not think that the charge of undue preference was correct as special rates to and from seaports obtain in every country.

[4] *Indian Railways, One Hundred Years, 1853-1953*, chap. v. (1953).

The financial condition of railways was changed radically owing to the depression and almost no addition to the mileage was made between 1932 and the beginning of the second world war. During the war some of the existing lines had to be dismantled to help military operations abroad. The financial effects of the rapid expansion during 1924-32 were felt by the railways in succeeding years. Financial control had been slackened to encourage rapid construction and estimates of costs had not been properly scrutinized. The results were described in the report of the Indian Railway Inquiry Committee in the following terms: [5]

> We cannot help feeling that in the past 15 years, stations, workshops and marshalling yards have often been built to be the last word in railway technique rather than on a careful calculation of probable requirements, and that prestige has perhaps counted far more than prudence. It is the worst feature of such overgrown schemes that they continue to burden the railways with excessive interest charges involved.

With the emergence of motor transport in the inter-war years the transport situation began to undergo a radical change. Growth of motor transport immediately led to focussing attention on the state of roads—municipal and extra-municipal. It was realized that availability of motor transport could transform many aspects of the economy, particularly the rural economy, and this possibility compelled reorientation of road plans and considerable increase in road mileage and the expenditure on construction and maintenance of roads. The Indian Road Development Committee (1927) examined this question and recommended the imposition of a special duty on petrol, a large part of whose proceeds could be distributed to provincial governments to carry out a consistent plan of road development. A road development fund was accordingly created in 1929-30. However, even before the creation of the road fund the expenditure of a number of provinces on road development had risen in a large proportion and the creation of the road development account did not immediately make a large addition to the existing scale of expenditure in these pro-

[5] Quoted in *idem*, p. 37.

vinces.[6] The onset of the depression soon after put a stop to the trend of continuous increase in expenditure on road construction and maintenance. There was only a small increase in the mileage of extra-municipal metalled roads in the country during the thirties, viz. from about 60,000 miles in 1930 to about 64,000 miles in 1939 in British India.

The depression had the result of bringing to the fore consideration of the problem of regulation of the growing volume of motor transport. This was because a significant part of the limited mileage of motorable roads ran parallel to the railways and the Railways complained that competition from motor transport on such roads greatly worsened their already depressed finances. Basically, regulation of motor transport was desirable for the safety of passengers and for prevention of cut-throat competition among the small hauliers. The first official inquiry was, however, initiated because of rail-road competition and resulted in creating some opposition among provincial governments who were interested in development of road transport. The Motor Vehicles Act was ultimately passed in 1939. This provided for compulsory insurance against third party risks and for the setting up of Regional Transport Authorities by provincial governments for issuing permits to passengers and goods carriers. The passenger permits were given for specific routes and the goods permits were valid for a region. It was possible to impose a number of conditions to regulate the operations of those holding permits.

[6] Mitchell and Kirkness, *Report on the Present State of Road and Rail Competition*, chap. vii (1937).

CHAPTER XX

Concluding Observations on the Inter-War Period

For the quarter of a century that lapsed between the beginning of the first world war and that of the second it is not possible to make divisions into periods of relative prosperity and adversity as has been attempted for the earlier period. During these twenty-five years severe famines were less frequent. The famines of 1918-19 and 1920-1 were the most serious. Also, with much better integration of the economy the effect of famine or failure of crops in dislocating economic life was not as serious as before. On the other hand, while the importance of purely natural phenomena somewhat lessened, the effects of cyclical fluctuations in industry and trade now became more pronounced in the Indian economy. The war boom and the post-war slump were the first manifestations in this direction. The effects of the world-wide depression of the thirties on the Indian economy were even more pronounced. The nature of the agricultural season still determined, in the main, the fortunes of rural society. However, the catastrophic fall in prices during the world depression ruined rural producers irrespective of the agricultural season.

Movements of population during these twenty-five years also revealed a markedly changing pattern. Heavy mortality was not caused by the post-war famines. However, the influenza epidemic of 1918 took a heavy toll and as a result the census of 1921 showed a very small increase over the population recorded in 1911. Thus the pattern of alternating decades of growth of population and its stagnation was maintained. The two following decades did not conform to this. The 1931 census showed that the population of India had increased by 10·6 per cent over the 1921 population. Some difficulty was experienced in the conduct of the census of

1941 and the full data were not analysed and published. The summary tables available show in 1941 an even higher rate of growth of numbers. The total population recorded was 389 million, an increase in ten years of 15 per cent. What was even more remarkable was that growth was experienced in almost all parts of the country so that regions which had for many decades been considered stagnant recorded significant increases in population.

The urban population formed a slowly increasing proportion of the total population census by census. Its percentage was 10·2 per cent in 1921, 11 per cent in 1931 and 12·8 per cent in 1941. The 1921 Census Commissioner discerned a distinct tendency on the part of urban population towards concentration in the bigger cities. In 1931 also the increase in population appeared to be the largest in the group of the biggest cities i.e., those with a population of 1 lakh and more. During the decade 1931-41 the population living in cities with one lakh or more increased by 81 per cent. Whereas the earlier censuses showed considerable variations in the fortunes of the individual cities, the 1941 census recorded a general growth over the entire group of big cities so that even cities like Benares and Surat, which had either declined or been stagnant previously, exhibited a large increase in population between 1931 and 1941.

It may be useful at this stage to refer to the results of a survey of estimates of national income of India. An authoritative review of national income data suggests that from 1860 to 1900 *per capita* income at 1948-9 prices rose from about Rs 170 to Rs 200 or by about 18 per cent.[1] As population grew by about 22 per cent during the period the national income in real terms grew little more than 40 per cent. At the same set of constant prices national income grew from Rs 200 in 1900 to Rs 260 in 1930 i.e., by about 30 per cent in 30 years. Then the level remained stable or, perhaps, declined after the second world war to a level of about Rs 250. The larger rise between 1900 and 1930 followed by stability until 1950 in terms of *per capita* income does not, however, depict the rate of growth of national pro-

[1] M. Mukherjee, *National Income of India: Trends & Structure*, chap. ii (1969).

duct because of a dissimilar rate of population growth during the two periods. While the population grew by only about 18 per cent during the first thirty years it increased by 29 per cent during the next 20 years. Thus, roughly speaking, the national product grew by a little less than 50 per cent during the first 30 years and a little less than 30 per cent during the next 20 years. The relatively adverse showing of the period after 1930 has to be attributed to the two main factors of the depression and of the world war.

One of the most important results of the depression on India was the unusual movement of exports of gold out of the country. As India is not a significant producer of gold these exports were made out of the stocks of precious metal built up in previous decades. Gold and silver was the form in which a very large proportion of the population of India kept at least a part of their savings. The relative importance of this form is brought out by the following estimates from the national income series.[2] During the decade 1860-70 on an average Rs 60 crores worth of gold and silver was hoarded in India per year. The corresponding figure for the period 1900-10 was Rs 90 crores. It was calculated that on the assumption that total savings were 5 per cent if allowance was made for this holding of precious metals, savings for the creation of productive assets would go down to 3·1 per cent in 1860 and to 3 per cent in 1900. The hoarding was not very high between 1870 and 1900 and averaged about Rs 30 crores a year. It was again very high from 1910 to 1930 being more than Rs 150 crores a year. Beginning for the first time with 1930-1 India became a net exporter of gold to finance its international balance of payments till the beginning of the war. The total net exports of gold from India during the decade amounted to over Rs 300 crores.[3] The universality of the practice of holding precious metals indicated that in the operation of the economy it served for the purposes of the household some important functions, such as liquidity and ready security. The large net exports from India during the thirties were the result of dishoarding of precious metals by peasant and other households throughout the country on an

[2] op. cit.
[3] A. K. Bannerjee, *India's Balance of Payments*, chap. 2 (1963).

unprecedented scale. Though no detailed study of the phenomenon has been undertaken it must have greatly weakened the economy for some years.

It is useful to examine data relating to movements in the Foreign Trade of a country in order to gauge the direction and extent of its economic progress. A statistical survey over the 25 years period shows no change in the main pattern of India's foreign trade. A comparison of the average of appropriate three-year periods (1911-12 to 1913-14; 1926-7 to 1928-9 and 1936-7 to 1938-9) will make this clear. Of these periods the last does not include Burma and is, therefore, not directly comparable with the first two. The chief difference made by the exclusion of Burma is the increase in the import of Grain, pulses & flour, Oils and Wood & timber in the list of imports to India and a diminution in the export of Grain, pulses & flour in the list of exports from India. Allowing for these differences made by the exclusion of Burma, it will be observed that over all the three periods, while the individual commodity groups changed places, the pattern as a whole remained the same. In exports, apart from the main changes noticed elsewhere in the composition of the jute and cotton group and the oil-seeds' group (seeds and oil-cake) there is little that invites comment. In imports the important changes are the extinction during the last period of sugar imports and the great diminution in the value of imports of cotton manufactures. It might seem as if the thirties was a more eventful decade in the sphere of foreign trade than any other. The depression led naturally to a very considerable contraction of international trade and this together with the general political situation led to a new orientation of Government policy in this respect. The definite adoption of Imperial Preference and the official and non-official bilateral trade agreements (for example, the cotton agreement with Japan and the Mody-Lees Pact) indicate very considerable departure from former conditions. Here again, the policy had reference naturally to external affairs and to non-Indian interests. The period between this change of policy and the declaration of war was

Average Values of Exports of Important Commodities

(In Lakhs of Rupees)

Serial No.	Average for 1911–12 to 1913–14		Average for 1926–7 to 1928–9		Average for 1936–7 to 1938–9	
	Commodity	Value	Commodity	Value	Commodity	Value
1	Grain, Pulses & Flour	5231·02	Jute Raw & Manufactured	8614·74	Jute Raw & Manufactured	4205·76
2	Jute Raw & Manufactured	4919·48	Cotton Raw & Manufactured	6708·15	Cotton Raw & Manufactured	3993·60
3	Cotton Raw & Manufactured	4430·56	Grain, Pulses & Flour	3895·45	Tea	2257·18
4	Seeds	2510·83	Tea	2937·57	Seeds	1591·60
5	Tea	1373·85	Seeds	2513·53	Grain, Pulses & Flour	1086·98
6	Hides & Skins Raw	1097·82	Leather	858·57	Leather	663·12
7	Leather	445·30	Hides & Skins Raw	851·63	Metals & Ores	635·19
8	Wool Raw & Manufactured	274·49	Metals & Ores	836·52	Hides & Skins Raw	444·06
9	Lac	203·10	Lac	703·45	Wool Raw & Manufactured	377·07
10	Metals & Ores	178·63	Wool Raw & Manufactured	530·79	Oil Cake	256·90
11	Oil Cake	121·63	Oil Cake	317·04	Fruits & Vegetables	201·65
12	Oils	114·51	Rubber Raw	239·03	Tobacco	189·25
13	Spices	92·53	Paraffin Wax	224·20	Lac	174·35
14	Coir	85·39	Spices	184·91	Mica	118·86
15	Coal & Coke	78·23	Tobacco	113·25	Paraffin Wax	94·53
16	Paraffin Wax	59·91	Coir	106·62	Oils	91·46
17	Rubber Raw	57·47	Mica	97·24	Coir	90·47
18	Fruits & Vegetables	52·43	Fruits & Vegetables	97·15	Rubber	86·48
19	Mica	42·58	Oils	84·44	Coal & Coke	78·48
20	Tobacco	42·35	Coal & Coke	76·53	Spices	75·85
	Total Exports	235,79·87	Total Exports	316,90·57	Total Exports	179,94·68

Average Values of Imports of Important Commodities

(*In Lakhs of Rupees*)

Serial No.	Average for 1911–12 to 1913–14		Average for 1926–7 to 1928–9		Average for 1936–7 to 1938–9	
	Commodity	Value	Commodity	Value	Commodity	Value
1	Cotton & Cotton Goods	6042·43	Cotton & Cotton Goods	6971·15	Cotton & Cotton Goods	2455·80
2	Metals & Ores	1679·03	Metals & Ores	2642·21	Machinery & Mill Work	1677·88
3	Sugar	1372·30	Sugar	1656·19	Oils	1385·89
4	Machinery & Mill Work	581·08	Machinery & Mill Work	1597·64	Metals & Ores	1131·52
5	Silk Raw & Manufactured	428·04	Oils	1060·23	Grain, Pulses & Flour	888·44
6	Oils	421·16	Vehicles	836·63	Vehicles	672·76
7	Hardware	386·96	Provisions & Oilman's Stores	613·16	Instruments & Apparatus	572·60
8	Wool Raw & Manufactured	357·33	Hardware	518·11	Paper & Paste Board	339·74
9	Provisions & Oilman's Stores	225·34	Wool Raw & Manufactured	495·02	Dyeing	335·53
10	Liquors	200·62	Silk Raw & Manufactured	488·62	Wool Raw & Manufactured	327·57
11	Instruments & Apparatus	156·11	Grain, Pulses & Flour	465·07	Chemicals	303·43
12	Vehicles	146·81	Instruments & Apparatus	446·47	Hardware	295·95
13	Paper & Paste Board	140·37	Liquors	359·00	Provisions & Oilman's Stores	276·32
14	Dyeing	128·53	Paper & Paste Board	312·92	Silk Raw & Manufactured	240·53
15	Drugs & Medicines	108·88	Dyeing	253·70	Liquors	226·93
16	Chemicals	97·08	Chemicals	252·41	Drugs & Medicines	221·24
17	Wood & Timber	74·42	Drugs & Medicines	196·81	Wood & Timber	211·32
18	Grain, Pulses & Flour	17·93	Wood & Timber	97·64	Sugar	29·36
	Total Imports	160,94·05	Total Imports	244,79·11	Total Imports	150,45·20

too short to reveal whether it would affect the character of India's foreign trade in any material manner.

Some progress in the establishment of new industries and expansion of old was made during the inter-war years. The main causal factor in this respect appears to have been the changed industrial, particularly fiscal, policy of Government. However, the changed policy was narrowly defined and except in the case of the sugar industry no large or rapid results flowed from its adoption. India cannot be said to have made any significant progress in industrialization during the period. Measured by any indicator such as the consumption in the economy of iron and steel or sulphuric acid or the generation of electric power India remained industrially backward and almost stagnant. Production of steel within India did not lead to increase in its internal consumption. Indian consumption of iron and steel 'remained static in the region of a million tons per annum on an average during the period separating the two world wars'.[4] During the depression years the average became even lower and in *per capita* terms the consumption of iron and steel in India in 1939 was distinctly lower than that in 1914.

An important prerequisite of industrial progress is that there should be sufficient capital accumulation flowing into industrial investment. The low rate of savings in the Indian economy and the important part played by holdings of precious metals in it has already been noticed. It was, therefore, natural that such industrial growth as took place occurred in urban areas where there was some prospect of such accumulation. The rise of modern industry is also closely associated with an appropriate institutional structure. Some progress in regard to the legislative framework of such a structure was made during the inter-war years. This was most evident in the field of money and credit. In 1920 the Imperial Bank of India was created by statute by the amalgamation of the three earlier presidency banks. This functioned as, in the main, a commercial bank. However, it was entrusted with the management of Government funds and took upon itself, initially, the responsibility of opening a minimum number of

[4] I. P. J. Thomas, *India's Basic Industries*, p. 10 (1948).

branches throughout the country. The central and provincial banking inquiry committees appointed by Government at the end of the twenties shed, through their reports, a great deal of light on the working of banking and credit arrangements in the country. In 1934 in view of the impending constitutional changes the Reserve Bank of India was established. This was a true central bank entrusted with the management of both currency and credit in the country. The growth of Indian joint-stock banks and of their business had been very considerable during the inter-war years and the development of capital markets had also taken place in a few Indian cities.

The Companies Act of 1937 governed the operations of India's public companies, commercial and industrial, as well as banking companies. While in most other matters Indian legislation followed English precedents it had to deal with the peculiar feature of the 'managing agency' system in the Indian Companies law. The managing agency originated in India because of the need for companies registered abroad to have trusted agents for managing their business in India and because in India itself the practices and institutions needed for the promotion and floatation of public limited companies had not grown. However, over the years many defects in the operation of the managing agency were noticed, flowing directly out of the unequal positions of the managing agents and shareholders. The most important provision of the 1937 Companies Act was putting the limitation of a term of 20 years to all future managing agency agreements and the automatic termination of all past agreements at a date 20 years after the passing of the Act if they had not terminated earlier. A number of other restrictions were also placed in the Act on agreements of managing agents with managed companies.

During the period of the rule of the East India Company the interests of a trading company and that of Government presumably responsible for the welfare of a people obviously came into conflict. With the transfer of Government to the Crown in 1857 this particular difficulty was resolved. The transfer did not, however, involve any change in the commercial or industrial policy of the Government of India. Long before 1857 private British capital had entrenched itself

in modern business in India. After 1857, through parliamentary intervention, British economic interests in India and abroad continued to dominate the policy of the Government of India. This was fully exemplified in the financial or fiscal policy or that relating to trade and industry. However, after the transfer to the Crown, British government in India began slowly to react to the requirements of the situation in India to the extent that these were unaffected by British interests. A beginning was made with policy measures intended to deal with periodic regional famines. These involved some elements of what would be termed interventionism and paternalism. The extension of a public works policy, first confined to the building of roads and railways for purposes of external commerce and defence, to large irrigation works was another instance. By the beginning of the twentieth century the agenda of the Government of India was more broadly conceived and ranged from Agriculture to Archaeology. Even so, active industrial policy was vetoed. The administration continued to be highly centralized and a strong bureaucracy was both the planning and administering organ. Hence the policies and measures were such as would be simultaneously adopted and applied by official agency over large parts of the country. The scope of their application and effectiveness were thus limited.

Because of some change in the political and administrative set-up the specific Indian point of view began to have some influence after 1919. Some positive policies, notably that of fiscal protection, were adopted; their administration, however, remained negative in spirit. Under dyarchy popular ministers were rarely strong and determined enough to adopt bold policies in relation to reconstruction and development and the financial and other limitations imposed by the political and administrative structure made it imposssible for an integrated policy to evolve in any province. It was only with the coming in of popular ministries in 1937 that new radical ideas could begin to be experimented with. The ministries were, however, short-lived. Thus though the inter-war period gave many indications of the directions of future change, India continued during it to be essentially an economy governed by and subordinated to British interests.

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